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ORIGINAL ARTICLES.

A REPORT OF FIVE CASES OF PLEUROTOMY BY RESECTION OF THE RIBS FOR EMPYEMA.

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To avoid repetition, I will in the beginning briefly state my method of operating. The sixth rib in the axillary region is my principal guide. Across this, nearly at right angles, I make an incision down to the ribs, about three inches long, commencing just in front of the posterior axillary fold, so that its centre shall correspond with that of the sixth rib. Across the centre of this incision I make a cross cut about an inch in length. The object of this last is not so much to facilitate the operation as the after-treatment. The sixth rib being bared, with a Hey's saw I cut it well nigh through at two points, completing the severance with bone forceps. By cutting the intercostal arteries with the saw they do not bleed. In fact, ligatures are seldom required at all in the operation. The pleura is now opened and the pus allowed to commence running out. With the forefinger in the cavity I feel to make sure of my distance from the diaphragm. I now remove a section of the seventh and then of the fifth ribs. I usually remove an inch and a half of the sixth, and about an inch of the seventh and fifth. The object of the longer section of the sixth is to facilitate the washings and use of the drainage tube after the resected ends of the others come together, which sometimes occurs immediately.

The cavity is thoroughly examined with the fingers or the whole hand inserted to the thumb, if need be. All large masses of fibrinous material and false membranes are removed with the fingers. Search is made for adhesions, and if any are found that would probably hinder reëxpansion of the lung, they are separated. A large quantity of hot water is injected from a Thudicum bottle or fountain syringe.

The patient is now turned on the affected side, to allow any water that remains to run out. A couple of stitches are inserted, the centre of the wound being left quite patulous. Gauze is placed over the wound, and over this a mass of oakum, which is held in place by a broad binder encircling the chest.

The main point in the after-treatment is to keep the cavity clean. To this end it is flushed out once a day with hot water injected as mentioned. At first two or three quarts are required to give a clear return current. These washings are kept up for a month, or longer, if need be.

About the end of the first week a tube is required to keep the wound patulous. I use a rubber tube at first, about the size of the little finger, diminishing as the case progresses. It is inserted just through the chest wall. As a case progresses, I guard against interfering with commencing adhesions by inserting only a small flexible tube in washing out the cavity, also by allowing only moderate force to the ingoing current. But little, if any, medicine is used. If the effusion be large, and especially if it be on the left side, congestion of the liver, from pressure of the ascending vena cava, is apt to remain for a time, requiring a cholagogue to set the patient on the road toward rapid improvement.

In the cases I shall now report it is hoped there will be found peculiar to each sufficient of interest to merit a perusal of all.

CASE I.—My first operation was done July 17, 1886, on a man of twenty-four years, of bilious temperament, and of good natural constitution. He afforded the following brief history. The month of April was spent in bed from typhoid fever, from which he convalesced slowly. On July 1st a troublesome cough led to an examination of the chest, which showed the left pleural cavity to be distended with pus. There was markedly present a symptom which I have found in all my cases of purulent pleuritis—a thickening of the subcutaneous cellular tissue over the site of the effusion. It was not detected by direct pressure, but by pinching up a fold of skin of the affected side it was found to be two or three times as thick as a corresponding fold of the opposite side.

July 8. His condition from loss of appetite and sleep, and from a distressing cough, was most pitiable. With the aspirator one pint of pus was drawn off, and five days later one and a half pints, with but little benefit.

17th. With the assistance of Drs. Jacob Reid, J. T. Eskridge, Hazlehurst, and E. C. Kimball, the operation was done as described. No disturbance was caused by the admission of air into the chest cavity; on the contrary, the pulse—which at the beginning of the operation was 130—fell during it to 100, the breathing improving in corresponding ratio.

On opening the pleura about two quarts of pus escaped. The lung was seen and felt to be greatly compressed against the mediastinum. No adhesions were found. The subsequent progress of the case was so smooth as to afford but little worthy of note. There was no bad odor in the discharge at any time, or elevation of temperature after the first few days. The pulse fell to 80, became full and strong, the appetite good, and the patient took on flesh rapidly. He did not keep his bed after the first week, although subsequent experience has convinced me that an early leaving of the bed should not be encouraged.

At the end of the fourth week, all discharge having ceased, the tube was removed and the wound allowed to close. The falling in of the chest wall was quite apparent, but as there was no abrupt sinking in at any one point, there was no deformity worth mentioning. There was some dulness on percussion from the thickened pleura, but the respiratory murmur was good everywhere. The man became quite fleshy and robust, and to all appearances perfectly well.

CASE II.—This case is even more interesting than the first, owing to the existence of phthisis.

Dec. 30. I was invited by Dr. Jacob Reid, of this city, to see a young man of twenty-two years, whose left pleural cavity was greatly distended, evidently with pus. Four years previously marked dulness with broncho-vesicular respiration was found at the left apex. The patient had suffered more or less with cough for years. Although delicate, he was not entirely unfitted for light occupation, and was seldom seen by his physician. His family history is bad—his father and mother being both very frail. The patient himself is tall, lean, and of a nervo-sanguine temperament—altogether a bad subject for an operation.

His illness dated back eight weeks, and was diagnosticated as sero-fibrinous pleuritis in the beginning. After a few weeks the fluid was thought to have diminished, but changed to a purulent character with subsequent increase a week or ten days prior to this visit. His temperature was 105°, with breathing and pulse to correspond. He was very much emaciated, and almost as pale as a corpse. He was greatly harassed by a distressing cough, the intervals of rest being of but a few minutes, many times only seconds. The expectoration—which was abundant—was quite pinkish from admixture of blood. With the aspirator one and a half pints of slightly pinkish pus were drawn off. The improvement in his condition was marked, but of only short duration.

January 1, 1887, with the assistance of my associates in Case I., and that of Drs. Tucker, Solly, and Pennington, the operation of pleurotomy by resection of ribs was performed. The quantity of pus was estimated by gentlemen present at a gallon, and yet, notwithstanding the opening admitted the hand, only about one-third of it flowed out with the patient on his back. The lung was compressed against the mediastinum until it seemed not thicker than a man's hand. There were some long bands of adhesion, but as they were situated laterally I did not think they would hinder expansion, and did not interfere. In this case there were not only large masses of débris, but the gutter at the junction of the diaphragm and ribs in the posterior part of the chest was filled with a semi-gelatinous mass which was removed with the fingers. Although I supposed I had removed all the larger masses, either by the fingers, or by means of the bucket of water which was injected into the cavity, yet at the next washing several brain-like pieces as large as a lima bean came away. The progress of the pleural trouble toward recovery, although slow, was uninterrupted. The tube was not removed until the end of the eighth week.

As the lung began fairly to reëxpand, the expectoration became large, amounting to more than half a pint of sero-purulent matter daily, while abundant moist râles filled the lung. Under less salubrious surroundings, but one issue would have been expected. In the aseptic air of this dry and elevated region the result was watched with interest, but without apprehension, as the appetite was good, the temperature normal—the patient meanwhile taking on flesh continuously.

It is now three months since the operation. Re-expansion of the lung is complete—the moist râles have disappeared, and the expectoration amounts to almost nothing. His weight is up to his average, and he is enjoying life immensely.

CASE III.—Feb. 12, I was invited by Dr. Fuller, of Manitou, to operate on a young man of twenty, who had been ill three weeks with pleural trouble. Within a few days past he had been tapped twice, a quart of pus being withdrawn on each occasion. With the assistance of Drs. Fuller, B. F. D. Adams, Kimball, and Hazlehurst the operation of resection of ribs was performed. On making a small opening into the pleura a stream of pus spurted to a distance of five feet, and persisted for some time. On enlarging the orifice a large quantity came away. The quantity in this case was enormous—more than it would seem possible for a pleural cavity to hold. The position and shape of the lung were interesting. It had been prevented from rising in the cavity by adhesions to the diaphragm and was compressed from above as well as laterally, so that the apex was on a level with the axilla—the fingers introduced in the wound passing readily above it, The lung, compressed against the mediastinum in every direction save from below, resembled in shape one-half of an ear of corn, split lengthwise, excepting that it was somewhat flanged at the base. The adhesions at the base were not interfered with, as it did not seem that they could hinder expansion.

The after-treatment was conducted by Dr. Fuller, who informs me that good expansion occurred, with reëstablishment of vesicular murmur everywhere, with perfect obliteration of the cavity by agglutination of the pleural surfaces—in short, that the patient did finely—far beyond all expectations.

CASE IV. *Empyema of eight years standing.*—March 11, 1887, with Dr. Adams I was called by Dr. S. E. Solly in consultation to see Mr. D., aged forty-four years, weighing 190 pounds, of strong build and powerful constitution, with the following history:

Eight years ago he had pleuritis of the left side. Was aspirated forty times at intervals of from four to eight days—pus being drawn. This was in the first year of illness. Subsequent to the last aspiration, on various occasions a large amount of pus had been discharged through the mouth, indicating the existence of a pleuro-bronchial fistula. He came to Colorado six years ago, and remained here three and half years, with great improvement. He then returned to Boston and remained there two and a half years. His health again failed. He expectorated largely, had copious night-sweats, and became greatly emaciated. He returned to Colorado in

November last. His expectoration soon ceased and general improvement occurred, and continued to within a week of this time. Since then he has been having a rise of temperature of from two to five degrees, with loss of appetite, oppression about the chest, and general malaise. Inspection of the chest disclosed a cicatrix between the third and fourth ribs, extending from the sternum a distance of six inches to the left. About the centre of this there was a small sinus, which extended down between the ribs, and which discharged a few drops of serous fluid almost daily with occasional small quantities of pus. By the physical signs a small collection of fluid in the subaxillary region was diagnosticated, which, from the history of the case and present symptoms, was believed to be pus. The following condition was also thought to exist: a condensation of the subpleural and interlobular cellular tissue, of long duration, with incomplete reëxpansion of the lung, and a consequent pocket with walls that slowly secreted pus which did not thoroughly drain off through the sinus in front.

To secure obliteration of this space the operation of resection of the ribs was advised and the following day was set for the operation. In the meantime quite a discharge of pus took place from the sinus, with relief from discomfort. But as the sinus was badly located for complete drainage, and as accumulations had occurred from time to time for years, and as there was constant danger of a reopening of the bronchial fistula and the patient was hostile to any further half-way measures and anxious for a radical cure, we decided to perform the operation.

On reaching the ribs a grooved director was pushed into the cavity between the sixth and seventh ribs which passed two and a half inches before encountering the lung. Upon its withdrawal no pus escaped although some was contained in the groove. An inch and a quarter of the sixth and seventh ribs was removed. On passing the finger into the cavity a depression four inches in diameter was found in the upper part of the lower lobe, in the margins of which were straggling bands of adhesions. In its centre a cicatrix marked the site of the bronchial fistula. The lung was greatly puckered about this point, and the visceral pleura thick and unyielding for a couple of inches in every direction. Beyond the margins of this cup-shaped depression the pleural surfaces were closely united in every direction excepting in front. The lower anterior margin of the upper lobe had evidently united to the chest while pushed upward from a former effusion, for when the adhesions were separated, it immediately expanded, dropped downward and backward, and jutted out into the wound. To relieve the lower lobe of constriction from adhesions they were separated for four or five inches in every direction from the site of the cicatrix. Beyond this they were so firm as to resist reasonable force. No expansion of the lung occurred in the vicinity of the cicatrix. To the eye this scar tissue was bluish and looked altogether different from the surrounding lung tissue.

At the time my opinion was that sufficient collapse of the ribs would occur, to approximate the chest wall to the bottom of the depression, but should such not be the case, from previous experience I felt satisfied that by keeping the wound open, any space left would fill up by granulation. In this case I had fears of resulting acute pleuritis, but it did not occur to any extent worth mentioning. In fact the patient scarcely lost a meal. In a few days the discharge became quite free, of an odorless purulent character.

It is now nearly three weeks since the operation and the case is progressing with every prospect of a perfect result.

CASE V.—March 24, 1887, Dr. Adams and I were called by Dr. Kimball to see with him a man of twenty-three years, who had recently been brought in from the mountains suffering from pleuritis of less than four weeks' duration. His temperature was from two to four degrees above the normal. The right side was bulged out, immobile, with obliteration of intercostal depressions. Heart apex in left nipple line. Skodaic resonance at right apex in front, resonance good between sternum and right nipple line to diaphragm, indicating adhesions of the lung in front. Flatness on lateral region and back from diaphragm to axilla and spine of scapula. Fremitus weakened but not suppressed. Vesicular murmur weakened and distant, yet heard all over the region of flatness so distinctly as to be quite perplexing. Subcutaneous cellular tissue of affected side thickened.

With the aspirator only a few drops of pus could be drawn despite repeated efforts, after several introductions of a probe to clean the canula, and yet when the aspirator was detached about half a pint was discharged through the open canula. Two days later pleurotomy by resection of ribs was performed. The most notable feature was the presence of a large amount of solid matter in the pleural cavity. After all pus had been emptied, the posterior and lateral parts of the cavity were found filled by a mass of fibrinous material. It was so solid that it had to be broken up and removed piecemeal. There was a pint measure full of it. It extended from the diaphragm to the spine of the scapula and from the spinal column to the axillary line. There was no difficulty in effecting its complete removal, although it was somewhat adherent to the opposing pleural surfaces. The cavity was left thoroughly clean. The lung was adherent in front and at the base and was greatly compressed from behind and laterally. It is, at the date of writing, five days since the operation and everything points toward an uninterrupted recovery.

ABDOMINAL SECTION FOR PELVIC ADHESIONS.

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ANNE D., æt. thirty-four, came under observation during the first week of last December. The following notes were taken at the time: As a child she was never particularly strong, though she enjoyed fairly good health. Occasionally she had attacks of diarrhœa, and when fourteen years old she had

pleurisy. She married at the early age of sixteen, and seven months later had a miscarriage which was followed by nine others during the ensuing seven years. She then had a child at full term, who is now living and enjoys good health. She has had one miscarriage since, this was about seven or eight years ago, after which she was treated for chronic inflammation of the womb. It was at this time that she first experienced pain on the left side, extending from the back to the groin and down the thigh. Exertion of any kind would cause her abdomen to swell upon this side. She frequently had cramps with alternating diarrhœa and constipation. She has worked hard during the past three years, and all her unpleasant symptoms have become exaggerated. She now complains of intense pain upon any exertion, especially severe in the region of the left ovary, cramps, flatulence, sometimes severe headaches, obstinate diarrhœa, great weakness, and general wretchedness. Rigors sometimes followed by fever and sweating have been among her many other symptoms during the past month.

She is a small, much emaciated woman, very anæmic, and of a highly nervous temperament; weight about ninety-eight pounds; lungs, heart, and urine normal; liver apparently normal; abdomen tympanitic, decided pain on pressure in left iliac region. Vaginal examination shows well-marked retroversion of the uterus, the left ovary bound down and adherent in the floor of the pelvis, the Fallopian tube thickened and of a doughy consistency. There is a decided pain throughout this mass. The right ovary is not so large or tender as the left and is more movable.

There is a profuse leucorrhœal discharge, a slight bilateral tear of the os uteri, and a lacerated perineum. She has been rapidly losing strength and weight, and has been a great sufferer for the past three months.

For two weeks preceding the operation she was placed upon the most active tonic and supporting treatment, notwithstanding which she seemed to lose rather than gain; her worst symptoms being left ovarian pain, cramps, flatulence, diarrhœa, daily rigors, followed by slight fever and sweating; steady and progressive loss of weight and strength. Her condition was most critical.

On the 21st of December, at the patient's home, with the assistance of Dr. Joseph Price, I removed the left ovary and Fallopian tube. The patient being etherized, a two-inch incision was made in the median line. The ovary was found firmly adherent to the floor of the pelvis and to folds of intestine. The uterus was slightly retroverted owing to traction by the adhesions, but otherwise normal. The right ovary was quite free. Enucleation was accomplished with difficulty. A silk ligature was applied close to the cornu of the uterus; the ovary and tube were then removed and the pedicle washed with 1:1000 $HgCl_2$ and returned. There was no hemorrhage from either broken adhesions or pedicle. The abdominal wound was closed tightly with catgut sutures, no provision being made for drainage. The dressing was protective, iodoform and bichloride gauze, a large mass of bichloride cotton, and a flannel binder.

During the first forty-eight hours she was allowed nothing but champagne, of which she took four ounces every second hour. She then began taking milk, beef-tea, soups, etc., and in a few days her diet was increased to semi-solids. Her highest rise of temperature was on the evening of the second day, when it reached 100⅘° F., from which point it steadily fell to normal on the fifth day and remained there. Metrostaxis came on thirty-six hours after the operation and lasted three days, accompanied with some pain and tympany. On the third day she had two large, offensive bowel movements, and from that time, throughout her convalescence, she had two or three large and usually offensive movements every day. On the eighteenth day the dressing was removed for the first time and complete union was found to have occurred. In a few days she was allowed to sit up and was soon able to be out of bed. During her convalescence she occasionally had twinges of pain in the left side, but not of the same character as those she had previously suffered. This soon passed off, so that now she experiences no pain whatever. She no longer has rigors or fever. Her strength is daily increasing and she has gained eleven pounds since the operation. Her bowels, which were troublesome for some time after the operation, are now regular. She has returned to her work as seamstress, and says that she has not felt so well and strong for years.

Upon examination the walls of the tube were found to be decidedly thickened, and though evidently the seat of inflammatory changes, it contained no pus and only a small amount of epithelium. Its calibre, however, was decidedly enlarged. The ovary contained four cysts with thin walls, each holding an amber-colored fluid, the largest being about one-half of an inch in diameter, and the smallest about the size of a pea.

I had expected to find in this case what has been termed pyosalpinx, or at least a desquamative salpingitis. I found neither of these conditions. It is true the ovary was the seat of cystic changes and appeared cirrhotic, but it has been claimed that this condition of the ovary is not necessarily pathological,[1] and I cannot persuade myself that the great suffering this patient experienced previous to the operation was due entirely to pathological changes in the ovary or tube. It seems more likely that the cause of all her trouble was a recurring pelvic cellulitis or peritonitis resulting in adhesions on the left side, which, by dragging on the appendages and binding down the ovary, caused pain by traction and, perhaps, interfered with function and gave rise to her other reflex ovarian symptoms.

It has been suggested that in these cases it would be sufficient simply to break up the adhesions, thus freeing the bound-down appendages, and a question might be raised as to the propriety of removing the ovary and tube in this case.

The following considerations will, perhaps, justify the procedure:

1. The patient had for many years been the subject of recurring attacks of severe pain in the left

[1] H. C. Coe: American Journal of Obstetrics and Diseases of Women and Children, June, 1886, vol. xix.

ovarian region, accompanied by the symptoms above described. These attacks had become gradually more and more frequent, so that during the two or three months immediately preceding the operation she was a constant sufferer, was rapidly losing strength and had become alarmingly emaciated.

2. Upon sight, the ovary and tube appeared to be diseased, and it has not yet been decided that they are not. Sections have not been made.

3. By dropping the appendages after breaking up the adhesions, the patient is subjected not only to the risk of peritonitis caused by rupture of cysts after necessarily rough handling, but also to the certainty of new adhesions forming, which might give more trouble than before, and might even lead to another operation.

ELECTRICAL AIDS IN THE TREATMENT OF INSOMNIA.

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WANT of sound, refreshing sleep is a symptom of many chronic diseases that taxes most severely the mental health of the patient, and, reacting upon the body, effectually opposes our best directed efforts toward a relief of the primary conditions. In relentless persistence it envelops its victims within the grasp of a hopeless hunger that causes them to look back upon moments of sleep with a longing far more intense than those of the desert traveller for the "shadow of a great rock in a weary land." The imperious nature of these longings needs to be felt to be understood, and the absence of familiar reference to them in the highly poetic language of the Orientals is strong presumptive evidence of the freedom of the ancients from this characteristic consequence of modern overwork and worry.

But whatever may have been the experience of the past on this point, there is no doubt of the present prevalence of this bad habit of the nervous system, and of the great value of any means to break it up that will not in its turn give rise to a habit equally pernicious. Such a means we undoubtedly possess in electricity, either alone or combined with massage, and its value in the treatment of the obstinately insomnious is too little appreciated by the majority of those called to combat the effects of narcotic habits or the insomnia of incipient nervous and mental diseases. While total failures occasionally occur, the results of its use are at times exceedingly noteworthy; and it, of course, has the advantage of being incapable of giving rise to a habit of its own, to the future detriment of the patient. The somnolent power of certain applications is so great that I have frequently had patients who were not troubled with insomnia go to sleep under them while sitting upright in a chair engaged in conversation. The principal disadvantage connected with this plan of treatment is the necessity for each dose being given by the physician himself or by a trained assistant; and too much stress cannot be laid upon the statement that neither the patient nor the ordinary attendants are capable of administering electrical currents for this purpose with any chance of success. I have been particularly impressed with the delicacy of technique required in some cases; a slight deviation from the proved method, an accidental shock, or the use of a too strong current destroying the good effect for the subsequent night at least.

The particular methods to be adopted and the question of conjoining other means of treatment must be decided in accordance with the nature of the case and the nervous balance of the individual, the rejection, or selection and combination, of drugs, electricity, massage, and other aids demanding the most intelligent judgment on the part of the physician.

Four different methods have been of service in the cases under my observation. Two of these methods are by no means hypnotic, but seem to make sleep at a subsequent hour more possible, and are best applied at any time that is convenient during the day up to within an hour or so of bedtime. One of them consists in a general stimulation of all the accessible muscles of the body, except those of the face and neck, by local applications of the faradic current after the manner prescribed so largely by Dr. S. Weir Mitchell in cases of rest cure. Beginning with one of the limbs, each muscle or group of small muscles related in action is stimulated in turn to contract some six or eight times until the whole body, except the face and neck, has been traversed. Medium or large electrodes will be found most convenient in stimulating the several groups, and I have also found the slowly isolated currents (about 80 per minute) most efficient in producing the greatest amount of motion with a minimum of pain.

During the application the temperature rises as a result of the work forced upon the muscles; the central organs are relieved of any surplus of blood; the whole of the peripheral motor system is exercised without calling upon the jaded nerve centres; and the latter are probably affected by salutary influences due to the direct centripetal conveyance of sensory stimulations. This procedure is especially valuable when the general nutrition is below par, or when the patient suffers from cold extremities and other inequalities of the circulation.

Another method that may be applied during the day is general franklinization. The patient is insulated and connected with one pole of a Toepler-Holtz machine; the other pole, in the shape of a ball electrode, is carried over the whole person above the clothing in such a manner that short sparks are drawn from all parts of the surface except the face and hands. All-wool clothing will be found to be the best medium for the trans-penetration of the sparks between the electrode and skin, as linen, and to some extent cotton fabrics also, intercept the current by virtue of being passable conductors themselves. The result is a strong stimulation of the sensory apparatus through excitations that fall entirely upon the peripheral terminations of the nerves. The element of motor stimulation being wanting,

this procedure is less conspicuously tonic and recuperative than the method of general faradization just mentioned, but it produces a decided feeling of exhilaration that is often followed by a reposeful reaction in which sleep occurs. From a physical point of view, this method of franklinization is closely analogous to Beard and Rockwell's mode of administering general faradization, and in practice I have found it to possess an equal therapeutic value without the disadvantage of requiring the clothing to be removed. In a case of chloral habit recently seen not only was the night's sleep notably improved, but a nap in the daytime occasionally followed the applications.

For the immediate production of sleep, however, these stimulating methods of treatment are frequently inferior to more sedative applications administered after the patient has been prepared for the night and surrounded with appropriate quiet and repose. Of these latter the most serviceable is the continuous galvanic current applied with anode to occiput and cathode to the back; although a gentle, rapid-succession faradic current similarly applied will act better in some cases. With both currents the electrodes must be large and well wetted, and should be placed in position while the current is at its lowest, the strength being then increased to the desired point. With the galvanic current a rheostat is absolutely necessary for the gradual increase of the current to about three to five milliampères and its equally gradual diminution at the end of the application. A milliampèremeter will also be found of great service in accurately indicating the current strength at a given moment; in its absence the sensations of the patient may be taken as a guide, the limit being a pleasurable warmth or slight burning sensation. Ten to fifteen minutes duration will suffice, at the end of which the current is to be imperceptibly lessened to nil and the appliances removed as quietly as possible. All shocks from sudden interruptions or variations of the current should be carefully avoided.

Instead of applying the anode of the galvanic current to the occiput, it may be applied to the subaural region as in the so-called galvanization of the sympathetic. The hypnotic effects are here at times greater, but the manipulation required is more delicate, and there is a strong chance of increasing the patient's wakefulness by blunders. As a rule two milliampères are sufficient in subaural galvanizations for this purpose.

Simple anodic faradization of the occiput is frequently attended with most gratifying results. In making this application the cathode should be placed in the position least likely to give rise to sensation (on the heel is preferable, but *not* on the thin skin of the instep), both poles being well moistened. The current is increased at once from the initial weakness to a strength that is distinctly felt at the anode and is not increased further, notwithstanding the rapid fading of the sensation as the nerve ends become tolerant of the stimulus, for a gradually increasing faradic current is anything but sedative. The full effect of this application requires that the note emitted by the hammer of the interrupter shall be clear and free from quavers due to irregular vibrations.

1706 WALNUT STREET.

REPORT OF AN OBSTETRICAL CASE, WITH SERIOUS COMPLICATIONS, CAUSED BY INDIGESTION.[1]

BY WILLIAM R. WHITE, M.D.,
OF PROVIDENCE, R. I.

THE nature and probable cause of complication in the following case will, it is hoped, justify the writer in reporting it.

Early in the morning of November 26, 1886, Mrs. J. sent for me to attend her in her first confinement. On arriving at the house, more than a mile distant from my own, I found her to be an American, short in stature, well formed, and eighteen years of age. She had not expected her confinement so soon by a month, but had no reliable data for determining just how many months gestation had been progressing. Her general appearance indicated perfect health, and her own statement that she "had never been sick" was undoubtedly true. Her condition during gestation had been excellent in every particular. She had attended to her usual household duties without inconvenience, had been out of doors more or less daily, had had a good appetite, had not been constipated, and had noticed no constitutional or local disturbance, except such as was incident to her increased size. Her feet and ankles had been slightly œdematous for a few weeks past.

Between two and three o'clock on the afternoon previous, she had been a guest at a bountifully laden Thanksgiving-day dinner-table, and, feeling perfectly well, had done ample justice to the feast of things so good to the taste, but oftentimes so bad for the digestion. She ate freely of the turkey and the numerous etceteras, including dressing and rich gravy. For dessert she had an abundance of suet pudding with sweet sauce. She suffered nothing from her repast, however, and retired that evening all right, so far as she knew. But she could not sleep, and about two o'clock the next morning, much to her surprise, began to have labor pains which continued. About the time they began, she had two or three loose, painless stools, of which no more exact description could be obtained.

Upon my first examination, at about 7 A.M., I found every sign and symptom of the case to be favorable. The woman was dressed, and about the house, being disinclined to lie down. She was cheerful, betraying little or no nervousness or dread. Her tongue was somewhat coated. The pulse was 72, and of excellent character. No œdema of the extremities existed. She had taken no nourishment since her Thanksgiving dinner, and desired none. Examination showed the vagina to be moist, the rectum empty, the os uteri partially dilated, with its margins thin and yielding, the membranes intact, and a vertex, easily reached,

[1] Read before the Rhode Island Medical Society, March 17, 1887.

presenting in the right occipito-anterior position. The fœtal heart was readily heard, its rate being about 150 per minute. The pains were then quite brief, and not very severe. They were frequent; but during the intervals the patient was as comfortable as need be, not complaining at all of nausea, intestinal pain, headache, or anything else. The urine was passed often. I advised her to take a little light nourishment, which was declined. Not caring to return home, I spent most of the forenoon within sight of my patient, and can assert that in every particular, so far as was manifest, the progress of the case for the next few hours was normal. Late in the forenoon the pains grew sharper, but the patient bore them well and insisted on keeping about, although advised to save her strength by lying down a part of the time at least. The pulse, noted frequently, ranged between 72 and 80, its good quality being constantly maintained. In short, up to twelve o'clock noon I anticipated only a normal condition of things for mother and child to the end of the labor. I will state just here that no opiate or medicine of any kind had thus far been given.

But now a decided change in the aspect of the case occurred. The pains became longer and more severe as the first stage of labor merged into the second stage, and the woman became very uneasy. She was now as anxious to get to bed as she had been persistent in keeping about the room. She was hurriedly assisted to undress and lie down. On examination I now found the os fully dilated, the head low down in the pelvic canal, with the membranes intact and greatly distended. On counting the pulse, I found, greatly to my surprise, that it was exactly 48 per minute. It was weak and soft, but regular, perfectly distinct, and easy to count. Auscultation revealed no abnormal heart-sounds. The slowness of the pulse, however, was almost startling in view of the existing circumstances and the suddenness with which the very marked change had taken place. If its rate had been 98, or 108, or 118, I should not have been surprised; but a pulse of 48 in a healthy, young primipara, just entering on the second stage of labor after a perfectly normal first stage, was a phenomenon never before encountered by the writer.

I am sure that the drop in the pulse-rate occurred within a period of ten or fifteen minutes, and during the excitement and hurry of being put to bed, as it had been counted not long before and found to be between 70 and 80. This great change in the pulse, however, was not accompanied by any immediate unfavorable change in the general condition of the patient. She was not pale, had no dyspnœa, showed no signs of syncope, or even weakness, and complained of nothing but the labor pains, which were strong and very frequent. On listening now for the fœtal heart I could not hear it at all; partially for the reason, I think, that the woman was so uneasy on account of the pains, though possibly its sounds may then have been so weak as to be inaudible, even under favorable conditions for listening. It will be remembered that earlier in the forenoon they had been heard and counted with ease.

The maternal pulse-rate of 48 continued, and I realized the need of completing delivery at once, for the safety of both mother and child. Natural forces very kindly accomplished the desired result and so promptly that even if the forceps had been applied with all skill and expedition, little time could possibly have been saved, as it was only twenty minutes after the woman lay down that the membranes were ruptured, the head appeared distending the vulva and was immediately born, the shoulders and trunk following without delay. The whole expulsion was accomplished, practically, by one prolonged uterine contraction, something in itself not often observed in cases of primiparæ at term. The mother's condition did not perceptibly change during the prolonged and severe expulsive effort, and I was able to devote my attention wholly to the infant for the next few minutes.

It was a male child, between five and six pounds in weight, fully developed and, apparently, dead, as it did not move, or cry, or breathe, or even gasp. Its entire skin was blanched to the degree of complete exsanguination.

But the heart was beating feebly, and leaving the funis untouched, I tried various methods of resuscitation—with no success for several minutes. It was only by repeatedly forcing my own breath into its mouth and trachea that I finally obtained the first attempt at inspiration. The child came round all right and soon the cutaneous circulation was re-established, making the skin as red as it had just been pallid. The cord was then tied and the placenta delivered immediately. The uterus contracted well and remained firm. The mother's pulse was still exactly 48, but she showed no signs of failing strength. Very soon, however, she began to complain of intense frontal headache, which had come on suddenly.

I ordered the application of cold water compresses to the head, gave her five grains of Dover's powder, to be repeated once if the pain continued. The room was darkened, and my directions were to keep everything about the patient as quiet as possible. I remained in the house an hour, when the pulse had risen to 54 and had improved in degree of strength and fulness. The headache was still severe. Hoping the patient would soon fall asleep, if left to herself, I went home.

Visited the case at 6 o'clock the same afternoon. Found the baby all right but the mother in an unsatisfactory condition. She had slept none, the headache had been incessant and very severe. She had been restless, tossing about and sitting up in bed. There had been considerable flowing, but not to an alarming extent. The uterus was well contracted. The urine had been voided. The pulse was 54, temperature, by the mouth, 102° F. The face was flushed, the eyes suffused. There was photophobia. Water had been taken freely to allay thirst. The patient's appearance was wholly unnatural, manifesting discomfort and restless excitement. She did not complain of nausea or abdominal pain. I readjusted the binder which had become displaced, and gave her twenty grains of bromide of sodium with directions for ten

grains to be given from time to time if the headache, wakefulness, and restlessness continued.

About 9 o'clock the same evening, a messenger came to tell me that my patient had been acting strangely, that she had been vomiting, had not been able to see, had for a time been unconscious, had been convulsed, and had not seemed to be in her right mind since. Of course, I went to the case as soon as possible, with thoughts of uræmia and post-partum convulsions or coma vivid in my mind. Found the woman quiet, but feeling strange and bad in her head. She knew me, but was much confused as to what had occurred to her since my 6 o'clock visit. She spoke without difficulty and said she had had some sort of a fit, during which she had bitten her tongue. Her pupils were alike but dilated. There was no other paralysis. Her pulse was 54, temperature 102° F. She had vomited profusely, but the matter ejected had been thrown away. She had passed water just before I arrived, but there was so much uterine blood mingled with it that it was useless to test it for albumen. I did not pass a catheter.

Anticipating a return of the brain symptoms, I decided not to leave the case that night, and went into an adjoining room to prepare a ten grain dose of calomel which I proposed to give her immediately and to follow it later by a full dose of castor-oil. Just then I heard the woman attempting to vomit. I went to her and supported her head while her stomach unloaded itself of a basinful of nasty, offensive, sour-smelling matters, evidently the products of indigestion, diluted by the water she had drank.

The effect of thus relieving the overburdened stomach was immediate and most favorable, as the woman said directly that she felt very much better, which was perfectly evident. The headache was less severe and the mind was now clear. The pulse remained 54.

The patient became quiet and bade fair to go to sleep soon. I directed that she should not be disturbed for any medicine that night, but be allowed to sleep as much as possible. I left her, feeling pretty confident that the worst trouble in her case was over. Saw her the next forenoon. She had rested well and was now quite comfortable, though the head still ached. She had not vomited again and there had been no return of the alarming symptoms of the previous evening. Her pulse was 54, temperature and pupils normal, tongue covered with a thick, white coating. The urine passed during the night contained too much blood to admit of a reliable test for albumen. I directed that she be given an ounce of castor-oil.

Upon my next visit, the following forenoon, my patient's unpleasant symptoms had all disappeared. The oil had caused free catharsis, the headache was all gone, she had slept well, the tongue was clearing up, appetite returning, breasts distended, temperature normal and pulse 65. I saw her a few times subsequently; she did not have a single unfavorable symptom, and at the end of two weeks I left mother and child doing as well as possible.

I have given the clinical history of this case thus explicitly in order that others may form their own opinions as to the cause of the unlooked-for alarming symptoms which complicated it, and which certainly form no part of the history of a natural confinement. Whatever may have been the cause of the abnormally slow pulse, headache, elevated temperature, and subsequent brain symptoms, on the part of the mother, it certainly came near resulting in the death of the infant from failure of the circulation, and, for a few hours at least, the woman's condition was not encouraging. I cannot assert that there was no albumen in her urine; indeed, very likely there was a trace or even more of it present at the time, but I do not think albuminuria or uræmia had anything whatever to do in causing the trouble. There certainly was no sign of septic influence, and hysteria may also be eliminated.

My own impression is that it was the excessive overloading of the stomach, on a day and hour most unfortunate for the patient, that must be regarded as the real and primary cause of the severe complications. Progress has been made recently in the study of the fermentative and putrefactive changes which the contents of an overloaded stomach may undergo, resulting in the development of certain toxic elements whose effects on the nerve centres and the circulation may be serious in the extreme. Possibly in this direction we may look for an explanation of some of the conditions present in the case just described.

Undoubtedly, also, the disturbance that would, under other circumstances, naturally have resulted from the excesses referred to, was greatly aggravated by the inevitable reflex irritation incident to the first and second stages of labor, and hence this reflex irritation may be regarded as the exciting cause of some of the symptoms.

SULPHURETTED HYDROGEN INHALATIONS AS A METHOD OF TREATMENT FOR PULMONARY TUBERCULOSIS.

BY ARTHUR C. HUGENSCHMIDT, M.D.,
OF PARIS, FRANCE.

THE subject of the treatment of pulmonary tuberculosis by means of sulphuretted hydrogen has attracted so much attention for past weeks, that it may not be without interest to describe the employment of this gas by another method which, during the many years it has been used, has given very satisfactory results. This method has added to its interest this factor, that while the treatment of phthisis by enemata shows, strange to say, no diminution in the number of tubercle bacilli contained in the sputa, and even, in some cases, an increase in quantity is said to have been observed, in this method, after a few days' treatment, the microörganisms are found to have greatly decreased in number, and, in some cases, totally disappeared.

The observations we shall describe have been made by Dr. B. Niepce, physician in chief at the mineral springs of Allevard, France, who, for a period of thirty-two years, has been enabled to observe the beneficial influence of the inhalation of the gases contained in the sulphurous water in the treatment of affections of the respiratory passages, having

obtained, in many cases, cures of phthisis of the first stage, and even second stage, with a notable amelioration of the distressing symptoms of the last stage.

The inhalations as administered at Allevard are given as follows: The patients are placed in a spacious room, which is about twenty-one feet long, eighteen feet wide, and eighteen feet high, with very large windows, to allow a rapid ventilation after the inhalations are over. In the centre of the room there is a jet of the mineral water, which, striking a concave plate placed six feet above the lower reservoir, causes the jet to separate and divide itself into many drops, which liberates the gases contained in the water. The gases and their quantity contained in a litre of the mineral water are:

Sulphuretted hydrogen gas .	24.75 c. cm.
Carbonic acid	97 00 c. cm.
Nitrogen	4.00 c. cm.

The cures of phthisis which had been obtained by Dr. Niepce during his long practice he could only attribute to the beneficial influence of the mineral water producing a salutary modification of the organism, but further explanations could not be given.

In 1883, however, he began his observations as to the influence of the inhalations upon the presence of the tubercle bacilli; and, to his surprise, found that, after a few days' treatment, in patients of the first and second stages of the disease, there was a great diminution in number, even sometimes complete disappearance.

He then undertook a long series of experiments, of which the following are the principal.

1st. Having ascertained the presence of bacilli in a sputum, he inoculated two rabbits and guinea-pigs with it. One month later they were all tuberculous.

2d. He left, for twenty minutes, in the atmosphere of the inhalation-room, a portion of the same sputum, which he then directly inoculated in rabbits and guinea-pigs; three months later, at the autopsy, no signs of tuberculosis could be discovered; these observations, repeated several times, gave negative results.

In a third experiment he took four mice, which were inoculated with portions of sputum containing bacilli; two of them were placed in the inhaling-rooms, the others left outside. Six weeks later, at the autopsy, the ones exposed to the inhalations of the gases were found free from tubercle; the other two, on the contrary, being absolutely filled with tubercular nodules.

Such satisfactory results led Dr. Niepce to experiment with inhalations of sulphuretted hydrogen alone, with equally good results.

1st. Two rabbits and two guinea-pigs were inoculated. On the twentieth day the two guinea-pigs were sick, and on the forty-fifth day the autopsy revealed extensive tuberculosis. The two rabbits, however, which had been inoculated with the same material, but which had been submitted for three weeks, three times a day for half an hour, to the inhalations of sulphuretted hydrogen alone, were absolutely normal at the autopsy.

2d. Sputum which had been exposed for ten minutes to an atmosphere containing three per cent. of sulphuretted hydrogen, was inoculated in rabbits, the organs of which were found normal three months later. This same sputum, which had not been exposed to the vapors, produced the disease in every animal inoculated with it.

3d. A patient in the second stage of the disease was submitted four times a day, for a period of fifteen minutes, to inhalations of an atmosphere containing three per cent. of sulphuretted hydrogen. On the twelfth day the number of bacilli had greatly diminished, and on the twenty-seventh day, when the cutaneous surface and sweat had an odor of sulphur, and the sputum contained sulphide of sodium, this sputum was inoculated in guinea-pigs, with negative results, no tuberculosis being produced; showing evidently that the bacillus or septic poison had lost its virulence.

To approximate the method of administration of this gas as nearly as possible to the one established by him at Allevard, he employed a reservoir made of zinc (that metal not being acted upon by the gas), the capacity of which was fifty litres; he dissolved twenty-seven cubic centimetres of sulphuretted hydrogen in each litre of water. The vessel being then filled with this water containing the gas in solution, was placed at a height of about ten feet, and an opening half an inch in diameter at the bottom of this reservoir allowed the water to come out as a small stream into a zinc vessel placed beneath it, the gas being so set free. The patients are directed to inhale four times a day, fifteen minutes at a time, and continue such treatment for several weeks, when the inhalations are suspended for some time, and then again resumed.

Dr. Niepce had already expressed the results of his experiments in a paper presented before the Academie de Médecine, in January, 1884, in which he concluded that the "inhalations of pure sulphuretted hydrogen, employed as a therapeutical agent, modify, and sometimes cure, pulmonary tuberculosis." His experiments were confirmed by Professors Cavalier and Mairet, of the Faculty of Montpellier; also by a recent graduate, Dr. Pilatte, who undertook researches on the relative power of the different antiseptics known, as regards their action on the tubercle bacillus, and reached the conclusion that, "of all the antiseptics employed, sulphuretted hydrogen was the most reliable, preventing the development of the bacillus, at the same time destroying this microörganism."

Such satisfactory results have been obtained from the employment of sulphuretted hydrogen brought into direct contact with the lung tissue, as to warrant further and extensive experiments in that respect, which will certainly prove most interesting.

The combined use of these two methods, namely, enemata and inhalations, may prove to be of the greatest benefit, for one might replace the deficiency of the other, when acting at the same time. For instance, the gas, when given by enemata, seems to have lost, when exhaled by the lungs, that special power of destruction of the tubercle bacillus which it possesses when brought in direct contact

with it; for we know the number of bacilli remains the same, or even increases under such treatment. It would be interesting to know if the sputum, after the patient has been subjected to the enemata treatment for several weeks, is capable, when inoculated in animals, of producing the disease. If so, sulphuretted hydrogen inhalations, by destroying the bacillus, and preventing its development by direct action upon it, will certainly be a most valuable adjunct to the new treatment.

THE ADMINISTRATION OF GASEOUS ENEMATA SIMPLIFIED.

BY H. M. BRACKEN, M.D.,
OF MINNEAPOLIS, MINN.

WISHING to try the treatment of pulmonary diseases by means of gaseous enemata the following appliance was used, on the suggestion of Dr. J. Clark Stewart.

An ordinary siphon bottle charged with carbonic acid gas and water in the usual way: a pound bottle containing a sulphide in solution, closely corked, and having a long inlet and a short outlet tube, both of glass; a rubber tube attached to the siphon connecting it with the bottle containing the sulphide solution, and the tubing with the metal tip of an ordinary fountain syringe conveying the sulphuretted hydrogen from this bottle, where it is generated, to the rectum. When ready for use the siphon is inverted (for in this position only the carbonic acid gas escapes) and the cock is opened slowly. It is very easy to regulate the supply of gas in this way. The advantages of this appliance are:

1. *Cheapness*, a thing always worthy of consideration in trying new methods. All the material required will not cost over one dollar, and any physician can put it in working order.

2. *Convenience for manipulation*, there being no delay in generating carbonic acid gas and preparing the ordinary gas bag. It also does away with the double valved syringe bulb and its continuous manipulation.

Siphons, charged, can be obtained from druggists or bottling companies at a nominal cost. Those charged with ordinary pressure will supply gas for two or more enemata.

One attendant can easily hold the inverted siphon, regulate the supply of gas, and observe the effect on the patient, while the patient is able to control the rectal tube.

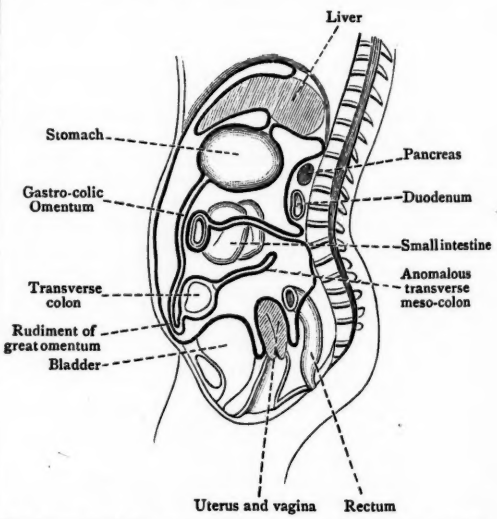
AN ANATOMICAL ANOMALY OF THE PERITONEUM.

REPORTED BY ALLEN J. SMITH, M.D.,
RESIDENT PHYSICIAN AT THE PHILADELPHIA HOSPITAL.

IN the abdominal cavity of a case recently upon the post-mortem table in the Insane Department of the Philadelphia Hospital a peculiar anatomical anomaly was discovered. On opening the abdomen, it was found that the course of the colon was entirely different from the usual arrangement. The cæcum lay in the normal position. The colon ascended on the right side to the lower surface of the liver, where, doubling on itself anteriorly, it passed downward; and when again in the right iliac region passed transversely across the hypogastric zone to the left iliac region. Here it turned upward, passed up to the left hypochondriac zone along the anterior wall of the abdominal cavity, where it doubled on itself posteriorly, and passed down to the sigmoid flexure. The gastro-colic omentum, usually insignificant in measurement, extended here six or more inches along the longitudinal axis of the body. The great omental apron was represented by a mere rudiment seen along the lower surface of the transverse colon.

Lifting up the transverse colon, another singular condition presented itself, explaining the unusual course of the colon. The transverse meso-colon was present, but entirely unattached to the posterior wall of the cavity, and limited posteriorly by a curvilinear free margin. At its widest point this meso-colon measured three inches. In the folds of the meso-colon along the margin passed the left colic vessels to and from the descending colon. This unattached meso-colon formed the posterior wall of a large pocket, the anterior wall of which was represented by the broad gastro-colic omentum; and in this pocket lay all the small intestine except a few inches of the lower portion of the ileum. The weight of the transverse colon, the weight of the small intestine, and the unattached transverse meso-colon had caused, by the continued downward pressure and lack of support, the anomalous course of the colon.

As seen from the outline of a median longitudinal section, the arrangement of the peritoneum in this case prevented entirely the presence of the small peritoneal cavity which usually communicates with the great cavity by the foramen of Winslow. The peritoneal reflections in this case were as



The heavy black line represents the course the peritoneum takes in the case described (Arranged from Leidy.)

follows: From the surface of the stomach the peritoneum passed downward a considerable distance; it then passed in front of the transverse colon, formed the rudimentary great omentum, and then passed posteriorly and inferiorly over the transverse colon. It then passed backward to form the lower fold of the transverse meso-colon, but instead of attaching to the posterior wall of the abdominal cavity, it doubled on itself and returned to cover the superior portion of the transverse colon, and passing off the colon formed the inner layer of the rudimentary great omental apron. Thence it was reflected upward to the lower curvature of the stomach, passed over its posterior surface, and gained the lower posterior surface of the liver. Thence it passed to the posterior wall of the abdominal cavity, over the pancreas and duodenum, covered in the small intestine, regained the posterior wall, and passed downward to be reflected over the pelvic organs. This accomplished, it covered the anterior wall of the abdominal cavity, and was reflected along the lower surface of the diaphragm back as far as the position where it became the suspensory ligament of the liver. It passed over the upper surface, margin, and lower surface of that organ, and then passed over to the upper and anterior wall of the stomach.

Laterally the folds of the anomalous transverse meso-colon were reflected as usual over the ascending and descending colons.

Unfortunately, the friends of the subject would not permit a permanent preparation of the anomaly to be made; and because of the rarity of the peculiarity, it was deemed proper to make a careful study and give an extended description of it.

JOHNSON'S QUANTITATIVE GLUCOSE TEST.

BY CHARLES F. ADAMS, M.D.
OF BORDENTOWN, N. J.

DR. JOHNSON has shown that an alkaline solution of glucose, when heated with a solution of picric acid, will reduce the bright yellow of the acid to a dark mahogany-red color, the depth of color being dependent on the amount of sugar present.

℞.—Glucose solution (gr. j to ℥j) . . fʒj.
Liquor potassæ . . . . fʒss.
Saturated sol. picric ac. (gr. 5.3 to fʒj) ♏xl.
Water . . . . . ad fʒiv.—M.

Put in a test-tube, mark the height of the mixture on the side of the tube with a file or other instrument, boil sixty seconds, cool by immersing the tube in cold water, and, if any loss by evaporation, add sufficient water to bring up to the line marked on the tube. The color obtained by this reaction is due to the reduction of as much picric acid to picramic acid as one-eighth grain of glucose, the amount present, will reduce.

Thus, having made a standard solution, we take a drachm of the suspected urine and add the liquor potassæ, acid, and water, and proceed as above. A comparison is then made between the resulting fluid and the standard solution, by means of the picro-saccharometer, which consists of a graduated tube of ten and one hundred equal divisions, with a shorter tube containing the standard solution clamped to one side of it. (See figure.)

Into the graduated tube a portion of the liquid to be tested is introduced to the ten-division mark. Should the two agree precisely in color, the suspected urine will have contained one grain of sugar to the ounce. If the mixture is darker than the standard solution, then add distilled or soft water cautiously, shaking until the color reaches the standard: then read off the degree of dilution. Each ten degrees of diluted fluid equals one grain of sugar to the ounce of urine. Thus, if ten degrees were enough, then one grain per ounce; if thirty degrees were required, then three grains per ounce.

The amount of acid used in the test will not reduce more than six grains of sugar per ounce; hence, in using the test when the scale indicates the maximum amount the urine should be diluted with an equal amount of water, and the operation repeated, care being taken to note the number of times the urine was diluted, in making the final estimate.

In making a series of fifty trial tests of urinous solutions of glucose of varying strength, unknown to myself, I calculated exactly the amount thirteen times; within a quarter of a grain of the amount, seventeen times; within half a grain, ten times; within three-quarters of a grain, six times; within one grain, four times. Calculated too low, eighteen times. Calculated too high, nineteen times. Average amount missed per ounce, one-third of a grain.

As will be seen, the estimation varied almost equally in the number of times it was too high and too low, showing the fault to be with the operator, and not the test.

As the color of the glucose solution is not permanent, Dr. Johnson imitates it with a solution of ferric acetate, made by the following formula:

℞.—Liq. ferri perchloridi . . . fʒj.
Liq. ammonii acetas,
Ac. acetic glacial (sp. gr. 1.065) . āā fʒiv.
Liq. ammoniæ . . . . fʒj.
Aq. destil. . . . . ad fʒiv. *B* M.

The ingredients are all of the strength of the British Pharmacopœia. I therefore have substituted the following:

℞.—Liq. ferri chloridi . . . fʒj.
Ammon. carb. . . . . ʒj.
Ac. acetic . . . . . fʒv.
Aq. destil. . . . . ad fʒiijss.—M.

These are of the strength prescribed by the United

States Pharmacopœia, and make a solution of the same shade.

A picro-saccharometer can be constructed very neatly by clamping to a 100 c. c. glass-stoppered "mixing bottle" a "German weighing bottle," both being standard bottles and sold by dealers in chemists' supplies. It is well to have them of the same diameter, although it is not necessary, as the ferric solution must be standardized by first comparing with the standard color solution made as before described. If the containing bottle be of greater diameter than the measuring, then the solution may be rendered lighter by adding water; and if of less diameter, it will be necessary to add a few drops of the liquor ferri chloridi.

As the solution of acetate of iron is bleached when long exposed to the light, I place the bottle containing the standard solution in a test-tube rendered impervious to the light by painting the inside with asphaltum varnish, the tube being of such diameter as will catch the lip of the standard bottle. Then, having the top of the stopper also coated with varnish, the solution is readily protected from light when not in use.

I found it much more convenient to measure five cubic centimetres of each liquid with a pipette of the proper size, than to measure the number of minims in a graduated measure. It is also easier to remember the five cubic centimetres than a different number of minims for each article.

With the following alterations in the strength of the solutions, we get the same result by taking five cubic centimetres of each:

℞.—Urine	5 c. c.
Liq. potassæ (sp. gr. 1.036) . .	5 c. c.
Sol. picric acid (gr. 3.5 to f℥j) . .	5 c. c.
Water	5 c. c.

Mix and proceed as before.

In standardizing the iron mixture, greater accuracy can be obtained by holding the solutions against a translucent substance, such as a pane of ground glass, or a sheet of white paper held between them and the direct light. The same precaution should be taken ever after, as the light transmitted through clear glass makes the standard iron solution look as much lighter as would be equivalent to three-quarters of a grain of glucose to the ounce in the test through translucent glass; the color of the *urine* solution is the same in either form of light.

An impromptu instrument that answers very well can be made by taking two test-tubes of equal size, and making eight or ten equal division marks on one tube, and using the other tube to hold the standard solution. In testing, place enough of the boiled urine in the tube to fill it up to the first mark, then dilute as before described in using the picro-saccharometer. Each mark will represent a grain of glucose to the ounce.

As Dr. Johnson has shown, we may reduce the amount of sugar per ounce to the proportion per cent. by a simple proportion, in which the first term is 455.7 grains—the weight of an ounce of water at 0° Cent., 100 the second term, and the quantity of sugar per ounce the third. Thus, if there be twenty grains of sugar to the ounce, then as 455.7 : 100 :: 20 : 4.3; or we may multiply the number of grains by the decimal 0.219; grains $20 \times 0.219 = 4.3$ per cent.

HOSPITAL NOTES.

PHILADELPHIA HOSPITAL.

A KYPHOTIC PELVIS.

Reported by BARTON COOKE HIRST, M.D.,
OBSTETRICAL REGISTRAR.

WHILE this deformity is not infrequently met with, a typical case is perhaps sufficiently rare to merit a short description. Frau Z., born in Posen, æt. thirty, has had five children, three of whom were stillborn. Her labors have all been tedious. A successful operation was performed seven years ago, in Schröder's Clinic in Berlin, for a vesico-vaginal fistula that followed her fourth confinement. She is but four feet seven inches high, although in other respects strongly built, and upon the lower part of her back is a projection formed by the last three lumbar vertebræ, which, she says, is the result of a fall in early infancy. The measurements of the pelvis are as follows:

Distance between iliac spines (ant.) .	26 cm.
" " " crests . .	28 "
Right diagonal	20 "
Left "	21 "
External conjugate (Baudelocque's) .	18 "
Diagonal "	11¼ "

Distance between the tuberosities of the ischia, 12 cm.; the width of the sacrum at the sacro-iliac junctions, 6 cm. Internally, per vaginam, it is possible to feel the bifurcation of the aorta and the powerful pulsations of the common iliac arteries. There is no spondylolisthesis, although the last lumbar vertebra is slightly displaced backward. The uterus, owing to the diminished length of the abdominal cavity, is longer in its transverse than in its vertical diameter, and the child lies transversely, with its head to the left. The woman is in the eighth month of pregnancy.

MEDICAL PROGRESS.

LAWSON TAIT'S METHOD OF CLEANSING THE PERITONEUM.—At a recent meeting of the British Gynecological Society, MR. LAWSON TAIT gave an address, with demonstration, of his method of washing the peritoneum with copious streams of warm water. The trocar which he employs for tapping the cyst resembles a large double-eyed catheter terminating in a rounded but flattened and sufficiently sharp point. To this is attached a long India-rubber tube. This instrument he also employs as a siphon for washing out the peritoneal cavity. Having first immersed it in a ewer of water of the requisite temperature, an attendant raises it when required, and the water flows through the trocar in a steady stream, which can be directed upon any part desired. Mr. Tait prefers this method to the excessive use of sponges, especially in cases where the peritoneum and intestines are smeared with the adhesive colloid material from a friable cyst. This substance is readily soluble and easily

washed away by the warm water. The water is clean water taken from the tap, and no special antiseptic precautions are employed.—*British Medical Journal*, April 9, 1887.

FATAL RESULT OF INTRAUTERINE MEDICATION.—DR. OTTO ENGSTRÖM, of Helsingfors, relates the following case in a Swedish medical journal. A woman, aged thirty-seven, had suffered from persistent metrorrhagia. The uterus was retroflexed, but no signs of past or present inflammation could be discovered. It was replaced and scraped out with a Simon's sharp spoon, two small spoonfuls of hyperplastic tissue being removed. A solution of iodine in iodide of potassium at 45° C. was then injected, the relative proportions of iodine, iodide of potassium, and water, being 1, 2, 30. No fever, and scarcely any pain followed. In five days' time a second injection was used, the temperature being 40° C., and the relative proportions of iodine, iodide of potassium, and water, 1, 2, 10. No pain was experienced, and the patient walked up and down stairs. On the evening of the second day, however, a rigor came on, followed by pyrexia, abdominal tenderness, diarrhœa, and convulsions, death occurring two days later. At the necropsy there were found broncho-pneumonia, chronic œdema of the lungs, endocarditis, and purulent peritonitis. The substance of the uterus was soft, friable, and gray-colored, containing specks of blood and lymph. The peritoneum over the uterus was of a yellowish-red color, and covered with puriform matter. The Fallopian tubes and their fimbriated extremities were not dilated or particularly reddened, and the mucous membrane presented no abnormality. The os uteri was too small to admit a fine probe. A large quantity of pus occupied the peritoneal cavity. Dr. Engström does not think any of the injection can have passed into the tubes, still less into the peritoneal cavity, and believes that the fatal peritonitis was due to an extension of the inflammation directly from the uterine wall to the peritoneum.—*Lancet*, April 16, 1887.

ARSENIC AND LITHIA IN DIABETES.—At a meeting of the Paris Société de Thérapeutique (February 23d) DR. MARTINEAU recommended the following treatment, with which, he said, he had cured sixty-seven out of seventy patients suffering from arthritic diabetes:

Carbonate of lithium . . .	3 grains.
Arseniate of sodium . . .	$\frac{1}{10}$ grain.
Carbonic acid water . . .	2 pints.

Effect the solution under pressure. The effervescing liquid is to be drunk at meals, mixed with claret, and the foregoing dose is to last for at least three meals, being taken at the two principal meals of the day, customary in Paris. No change of diet is necessary. Dr. Martineau's fellow members—Dr. Dujardin-Beaumetz among them—were somewhat sceptical about the value of the treatment, but it is so simple and easy that it can be given a trial when the patient is not dangerously ill. —*Therapeutic Gazette*, April 15, 1887.

IODIZED STARCH AS AN ANTISEPTIC.—ENGLAND describes his preparation and use of this substance as follows in the *American Journal of Pharmacy*, for April, 1887:

Apropos of the subject of antiseptics, the author was led some months ago to advocate the use of *iodized starch* as an addition to our rapidly growing list of these compounds. Reasoning that the antiseptic activity of iodoform and bismuth subiodide must depend, in part or in whole, upon the iodine freed in their decomposition, in contact with decomposing putrescent organic matter, it was thought that if an iodized compound, readily decomposable, was subjected to the same conditions, that it would induce the same healthful process in the latter case as well as in the first. Full experience has demonstrated the value of the theory in this instance, and iodized starch is now used daily in our hospital practice, and recognized as a valuable adjunct in certain forms of antiseptic treatment. It is applied in the same manner as other antiseptics, namely: first washing out the wound with pure water, and drying out as far as practicable, then thoroughly dusting in with iodized starch and covering the wound, even beyond its outer edges. The applications are generally made in the morning and evening.

In the removal of the dressings the absorption of the iodine is most strikingly shown. Whereas, in the central parts of the wound, where the exuding pus or matter has come in contact with the bluish-black powder, the same has become wholly decolorized, and shows the white color of the starch, yet, around the outer limits of the dressing, where no excretive matter has exuded, the bluish-black color remains unaffected.

Then comparative trials with iodoform, subiodide of bismuth, and iodized starch have demonstrated that it possesses valuable antiseptic qualities as a dressing, and though it may not be superior to the first two named, yet, at the same time, it has occasionally succeeded where they have given unsatisfactory results.

In its preparation the pharmacopœial method, given under "Amylum Iodatum," has been followed, namely, the trituration of 5 parts of iodine with a small quantity of distilled water, and the gradual addition of 95 parts of powdered starch, until the compound has assumed a uniform, bluish-black color. Then dry at a temperature not exceeding 40° C. (104° F.), powder and bottle or box.

HYGIENE OF THE EYES AMONG SCHOOL CHILDREN.—*The Sanitarian* for March, 1887, quotes DR. LINCOLN, author of the Lomb Prize Essay, as follows:

In school work we should require (1) a comfortable temperature, and especially let the feet be kept warm and dry; (2) good ventilation; (3) loose clothing; (4) erect posture; (5) little study before breakfast, or directly after a hearty meal; none at all in twilight or late at night; (6) great caution about study after recovery from fevers; (7) light abundant, but not dazzling; (8) sun not shining on the desk, or on objects in front of the pupil; (9) light coming from the left hand or left and rear; under some circumstances from in front (no light from the right of the pupil permitted); (10) the book held at right angles to the line of light, or nearly so; (11) frequent rest by looking up; (12) distance of book from eye about fifteen inches.

THE TREATMENT OF ENDOMETRITIS.—DOLÉRIS, of Paris, concludes his articles in the *Archives de Tocologie*, March 15, 1887, as follows:

In the majority of cases of chronic endometritis, the

process of sponging or swabbing out the uterus with cotton saturated in glycerine-creasote, one-half or one-third, was employed. To apply this properly, the uterus should be pulled down; if possible, the cervical canal should be dilated, this may be done advantageously with tents soaked in creasote and glycerine. If sponging or swabbing prove inefficient, curetting the interior of the uterus should be employed, and afterward injections of suitable antiseptics.

Doléris has treated, upon these principles, 339 cases. The treatment has been unattended by accidents, and the large proportion of the cases resulted favorably.

AN OINTMENT FOR ECZEMA.—We quote from the *Journal of Laryngology* for April, 1887, the following formula for Van Harlingen's eczema ointment:

℞.—Glycerol. plumbi subacetat. (Squibb)	℥ss.
Glycerin.	℥jss.
Ung. aq. rosin.	℥j.
Ceræ albæ	q.s.

Ft. ung.

HERNIOTOMY UNDER COCAINE ANÆSTHESIA.—SOUTHAM, at the Manchester Infirmary, performed the operation mentioned, as follows: "Twelve drops of a ten per cent. solution of cocaine were injected into the subcutaneous tissue over the hernia, and five minutes afterward the operation was commenced and carried out in the usual way; the sac was opened, and its contents, which consisted of a knuckle of congested intestine, readily returned into the abdomen after the stricture had been divided. The sac was separated from the surrounding tissues, and a catgut ligature having been secured round its neck, it was removed on the distal side of the ligature. The operation, which lasted about twelve minutes, was almost painless; the patient was just sensible of the skin incision, and complained of a little pain while pressure was being made upon the bowel during its reduction, but the other steps of the operation appeared to be hardly felt."—*Medical Chronicle*, April, 1887.

MICROÖRGANISMS UNDER THE ANTISEPTIC DRESSINGS.—STÄHELI has investigated this subject extensively, and his results are quoted by the *Medical Chronicle*, of April, 1887, as follows: "As the question of the occurrence of microörganisms under antiseptic dressings has been variously answered by many observers (Ranke, Busch, Hirschfeld, Fischer, and others), the author has investigated the subject afresh, and with newer methods. His researches are based on fifty-nine cases (amputations, herniæ, removal of tumors) observed in Professor Socin's Clinic. In that clinic the operation-room is disinfected with carbolic acid, so are the instruments; the sponges are kept in a five per cent. carbolic solution, and are disinfected with seven per cent. zinc milk (zinkmilch, of which the composition is not given). For irrigation, 1 : 1000 sublimate solution, or 1–2 per cent. zinc milk is employed. On the line of suture, zinc paste, over that gauze saturated with zinc milk, with pads of cotton-wool, or turf moss cushions. During the first change of dressing, with a platina needle that had been submitted to a red heat, some secretion was taken out of the deeper part of the drainage tube and inserted into peptone glue, gelatine, or blood serum, or they were used for the preparation of dry specimens. Besides this, a small piece of tissue was taken with a sterilized scissors from the wound (after Kümmel's method) before the application of sutures, and implanted into the nutritive substance. The microscopical examinations were made with a Zeiss' immersion $\frac{1}{18}$ and Abbe's illuminator. Of the fifty-nine cases, twelve healed by the second intention, and in all of these microörganisms were found. In the remaining forty-seven healing took place by first intention; in fifteen microörganisms were discovered, four times they were only found in the dry preparations—in the latter cases the organisms were dead, and did not develop in the cultures. The antiseptic method therefore is able to keep the microörganisms from the wound. The microörganisms found in the wounds which healed per primam and per secundam were cocci, bacteria, and bacilli, either alone or in combination. Pathogenity, therefore, does not depend on the form or quality of the microörganisms. The influence produced by their number can only be determined by experiments on animals, and only very imperfectly by microscopic examination of the secretions. The infection of the wound is brought about chiefly by contact. The behavior of the secretions is a chief factor in influencing the healing. When drainage is not perfectly free, microörganisms in large numbers, and of the most varied kind, are found. The relation of the fever is not quite constant. In twenty-two of forty cases, in which microörganisms were found, healing went on without any elevation of temperature; and in four of seventeen cases, in which no fungi were discovered, fever occurred. The gravity of the operation exercised a very distinct influence on this symptom. Of the wounds that healed per secundam only in those that resulted from small operations was there a normal temperature. The portions of tissue removed before the application of sutures showed almost always—nine of eleven cases—that fresh wounds already contained microörganisms. Only in one case on the third day new bacteria were found, in addition to those previously discovered in the tissues. These microorganisms increased in number as time advanced. The author thinks that the microörganisms found during the process of repair have generally gained access to the wound at time of operation, and the antiseptic means employed do not in all cases prevent this. A wound may contain non-pathogenic microörganisms without any detriment to the healing process. Of the pathogenic fungi, which may act injuriously, staphylococci (aureus and albus) occur most frequently, and wound secretions, when stagnant, are the best soil for the development of these microörganisms."

ANTI-STRUMOUS RESOLVENT LOTION.—DESCROIZITTES is quoted by the *Journal of Laryngology* for April, 1887, as prescribing the following:

℞.—Chloride of sodium . . .	℥ss.
Sulphate of magnesia . . .	℥¼.
Tincture of iodine . . .	℥¼.
Distilled water	℥37½.

Compresses soaked in this solution are applied to strumous enlargements.

BINIODIDE OF MERCURY AS AN ANTISEPTIC.—DR. P. K. BOLSHESOLSKY, of St. Petersburg (*Vratch*, No. xi., 1887, p. 220), from numerous experiments made by himself in Professor A. P. Dobroslavin's laboratory, concludes that biniodide of mercury is a more powerful and less poisonous antiseptic than corrosive sublimate. Thus he fully confirms the observations of Bernhardy. A solution of 1 : 4000 destroys putrefaction microbes more completely than a sublimate solution of 1 : 2000. The biniodide dissolved in a solution of iodide of potassium was recently tried, with apparently good results, in three cases of laparotomy, under Professor A. I. Krassowski. For washing the floor, a solution of 1 : 4000 was employed; for disinfecting the hands, 1 : 2000; for instruments, 1 : 2000 and 3000.—*British Medical Journal*, April 9, 1887.

METHYLAL.—DR. B. W. RICHARDSON has written, in the *Asclepiad* No. 13, as follows:

In my report of 1869 I showed that methylal, which is very soluble in water, could be administered by the mouth when diluted with water, or by hypodermatic injection, and I have prescribed it occasionally, as a mixture several times. I usually begin with a fluid drachm dose, mixed with either glycerine or syrup of orange flowers and distilled water. Example:

Methylal, pure	℥xj.
Syrup of orange flowers	℥iv.
Distilled water	℥vj.

Mix. To make a solution of 6 ounces; of which let 1 to 2 fluid ounces be taken in a wineglassful of water as directed. The dose may gradually be increased to twice the above quantity or more.

In action, as a medicine, methylal lies between alcohol and anhydrous ether. It quickens the action of the heart with reduction of arterial pressure; it makes the respiration slow and deep; it induces a tendency to sleep; and it is a sedative to pain, but not to a very deep degree. On the whole, it would be best to keep it in the group of anodyne antispasmodics, in which I originally put it. It causes very little muscular excitement and no vomiting, but after long inhalation of its vapor it produces a free flow of saliva. As it mixes well with alcohol and with ether it might be administered with either of these agents; and it might also be given with amyl nitrite for the relief of colic, asthma, angina pectoris, or tetanus; but before it can come into general use it must be reduced in price.—*American Journal of Pharmacy*, April, 1887.

AUTO-CÆSAREAN SECTION.—AISENSTATT, of St. Petersburg, reports the following case in the *Vratch* for 1886, No. 42:

The official inquest found that a peasant woman, having been five times pregnant previously, had conceived the sixth time unlawfully, in the absence of her husband. Although upon his return she was kindly treated, she had made the incision while in the upright position, and extracted the child; it was of the male sex, twenty inches long, and weighed six pounds; it lived twenty-four days.

The mother was found by the daughter, and still possessed the strength to go to the stove (or oven), and there lay down. The oven answers the Russian peasant oftentimes as his bed. After some time she left her position, but fell exhausted; she died that night from hemorrhage.

The autopsy found the body of a young, very anæmic woman; in the *linea alba* an incision five inches long, with cleanly cut edges, between which no blood-clots remained.

The uterine wound was straight, made in the lower portion of the uterus, and four and a third inches long; the uterus was enlarged, the *os uteri* permeable for four fingers.

In addition to this case, one reported by Eon, occurring in a negress, in 1769, is cited; and also the "Viterbo" case, both of which recovered.

THE FERTILITY OF WOMEN.—SCHBANKOW concludes as follows in an article in the *Zeitschrift für Geburtshilfe und Frauen Krankheiten* (Russian, 1887, No. 1):

His investigations were upon the influence on the fertility of women exerted by absence, at different intervals, of their husbands. In the districts of Jaroslawl and Kostrowa, and in many other Russian provinces, the greater portion of the male population of the villages is obliged to seek work in other localities during the summer, twelve per cent. of the entire population thus temporarily emigrating.

Women whose husbands remained at home during the entire year averaged 9.2 children each, excepting the sterile women, who were 3.33 per cent. of the whole number; women whose husbands left their homes to procure work averaged 5.2 children each, excepting the sterile, who were 11 per cent. of the whole number.

The writer finds the cause for these facts, not in bad hygienic surroundings, but in the severe manual work which falls upon the women in the absence of the men, tending to produce uterine disease and facilitate abortion, and also to produce amenorrhœa; in the interruption of the sexual relations thus produced; and in the frequency of syphilis and other venereal diseases, as contracted by men in strange towns, and communicated to their wives.

TREATMENT OF SEVERE MALARIAL INFECTION.—DR. MANSON, of Richmond, Va., in a paper published in the *Transactions of the Medical Society of Virginia* for 1886, described the following plan of treatment which had been very successful in his hands:

Should the employment of morphia have failed to allay the pain, nausea, and vomiting, it should be repeated, but allowing at least four or five hours between the administration of the doses, whether introduced beneath the skin or into the rectum. At bedtime—say, at 9 or 10 o'clock—it is our invariable rule to administer a cathartic dose of calomel and rhubarb of 10 or 12 grains each. At some period before or after midnight the fever will generally be found more or less to decline. We prefer this period for the commencement of the abortive means, because our experience teaches us that quinine, the principal remedy, is better borne, and produces its salutary effects in a more decided and complete manner than at any other time. We now, therefore, usually administer from 15 to 20 grains of the sulphate of quinine at a single dose, in pills or capsules,

or diffused in a wineglassful of water. *We regulate the dose by the degree of fever present.* If it is *intense*, we administer the *larger quantity;* if *very moderate*, the *lesser will answer.* Under the combined action of the mercurial and quinine, free evacuation of the bowels will usually occur, but rarely excessive. Three or four hours are now suffered to elapse. The condition of the patient will now be found generally much improved. The gastro-hepatic and cerebro-spinal pains are either removed or mitigated, the pulse becomes less frequent and more soft, the skin relaxed and moist, and the gastric irritation subdued. We therefore repeat the quinine in diminished doses of 5 or 6 grains every three or four hours, until the period of chill has passed, generally exhibiting altogether from 25 to 40 grains before that time. Under this simple plan of treatment, remittent fever is certainly and safely cured. We have in this manner arrested the disease in many hundred cases, in one night.

ALARMING HEMORRHAGE AFTER TONSILLAR EXCISION ARRESTED BY TORSION OF THE ARTERY.—DR. CLINTON WAGNER reports the following case in the *New York Medical Journal* of April 16, 1887. Madame B. F., aged about thirty, an opera-singer by profession, consulted me for sore throat. I found the left tonsil greatly enlarged, and she informed me that it frequently became acutely inflamed. I recommended excision. The gland was partly covered anteriorly by the column of the soft palate, and extended so far downward into the pharynx that I had great difficulty in encircling its inferior portion within the ring of the guillotine; finally I succeeded in removing almost the entire gland. A gush of blood followed, but apparently not greater in quantity than is usual after this operation. The bleeding increasing instead of lessening, I applied to the cut surface of the gland the persulphate of iron, which failing, I resorted to compression, but I discovered afterward that it had not been exerted in the proper direction. Nearly an hour had elapsed since the operation, a large amount of blood had been lost, vomiting of the blood, which had found its way into the stomach, ensued, and the patient was rapidly losing strength. I cleansed the parts thoroughly of clots of blood, but, not finding the source of bleeding, I forced the tongue, by means of the depressor, upon the floor of the mouth as far as possible. In the space between the pillars of the soft palate, apparently springing from the root of the tongue, I discovered an artery of considerable size, bleeding freely and with such force that the blood was projected over and beyond the depressed tongue to the opposite side of the mouth. The bleeding vessel, now located, was, without much difficulty, taken up with an artery-forceps and twisted, and all further hemorrhage was effectually controlled. I think the divided artery was either the tonsilar branch of the facial, or the largest of the pharyngeal branches of the ascending pharyngeal, both of which are given off from the external carotid.

ANTISEPSIS BY CORROSIVE SUBLIMATE IN TRACHEOTOMY.—The method of WATSON CHEYNE, of London, is as follows: The trachea must be opened more freely than usual, with the primary object of inspecting the interior of the trachea. If the trachea is healthy, it will present a bright red appearance; if membrane be present, it will have a dull gray color. When no membrane has been formed, either a canula is inserted into the lower angle of the wound and the trachea filled up above with strips of thin rag soaked in a watery solution of bichloride of mercury (1 in 2000), the process being repeated every two hours; or, the trachea is kept open with Golding Bird's dilator, and the surface brushed from time to time with a weak solution of the perchloride. There are contending advantages in each method. If the membrane has spread to the trachea, it is pulled off with dissecting forceps, the resulting raw surface, and especially the spreading edge, being touched with the 1 in 500 bichloride solution.—*Journal of Laryngology*, April, 1887.

POMADE FOR CUTANEOUS DISORDERS DURING PREGNANCY.—MONIN, in *L'Union Médicale*, of March 29, 1887, gives the following formula:

Zinc. oxid. pulv.	gr. 3.
Hydrarg. ammoniat. (white precipitate)	gr. 1½.
Ol. theobromi,	
Ol. ricini	āā ʒ 2½.
Ol. rosæ	gtt. 10.

This may be applied to the face morning and night.

WHEN SHALL TRACHEOTOMY BE DONE?—RANEON DE LA SOTA Y LASTRA, of Seville, in the *Journal of Laryngology* for April, 1887, after citing the statistics of the principal hospitals of the world, concludes as follows:

"Undoubtedly, too many patients are allowed to die from indecision on the part of the operator. It should be a golden rule to *operate early*, *slowly*, and *carefully*, and not to halt between two opinions until the child has passed from a comparatively comfortable stage 'in extremis.' There is probably no operation in which indecision is more fatal. This indecision is partly due to the failure of the operator to realize the right moment for action, and partly to fancied dangers as to the operation itself. Trousseau's maxim, that a badly performed operation, with skilful after-treatment, will lead to a satisfactory result in many a case in which an operation, skilfully performed as possible, left to careless after-treatment, would have been followed by fatality, should be always borne in mind. The country practitioner should always be able to perform tracheotomy, and should have the necessary instruments always in his possession. The prognosis of his case may become absolutely hopeless while he is occupied in sending miles for the skilled surgeon, and he should have sufficient knowledge of anatomy and surgery to be able to act promptly in an emergency."

AN OINTMENT FOR OBSTINATE ACNE.—The following is known as Wilkinson's ointment:

℞.—Naphthol.	ʒ 2½.
Sulphur. præcipitat. . . .	ʒ 12½.
Vaseline or lanoline,	
Potassium soap	āā ʒ 6¼.

M. ft. unguentum.
Sig.—Local use daily.
—*Revue de Thérapeutique*, March 15, 1887.

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ELECTRICITY IN THE TREATMENT OF CERVICAL CATARRH.

THE use of electricity in the treatment of diseases of women constitutes one of the most important advances in medicine. It is probable that we are only beginning to recognize the value of this agent, and that the future will show that it has a much greater utility than has yet been given to it.

From Lutaud's *L'Obstetrique et la Gynecologie en* 1886, we learn that JOURET treats catarrh of the neck of the womb by faradization of the uterus, and galvano-caustic applications to the cavity of the neck. The purpose of the former is to excite contractions of the uterus, and thus relieve its engorgement and the hindrance to circulation, a condition so liable to occur from the anatomical structure and functions of the organ. In all autopsies of chronic endometritis there are found not only lesions of the mucous membrane, but also of the parenchyma. It is claimed that electricity, by exciting contractions beginning at the internal orifices of the oviducts and at the fundus, relieves the stasis in the muscular parenchyma; and that the uterus is subjected to interstitial massage which restores its lost tonicity. It not only produces these results, but by its dispersion upon other pelvic organs, it also exercises a favorable influence upon their circulation and innervation.

For the application Jouret directs that the patient should lie upon her back, with the pelvis somewhat elevated, and that the bifurcated positive pole (covered with moistened chamois skin) should be applied to each side of the recti muscles just above the pubes. The negative pole, having the form of a uterine sound, and covered with caoutchouc to a little more than an inch from its extremity, is introduced into the cavity of the neck, or of the body, if the internal os permits. Tripier's instrument is preferred; by it the number of interruptions may be made to vary from fifty to three thousand per minute, and the current can be graduated in tension and intensity. In uterine faradization the intensity of the uterine contractions should be progressively increased according to the sensations of the patient; but when the pain becomes decided, the intensity should be lessened. The duration of a sitting will vary from five minutes as the minimum to ten as the maximum, according to the sensibility of the person, or the atony of the uterus, the degree of the engorgement, and the length of time it has continued. After an application, if it be properly conducted, the patients, nine times out of ten, express themselves as feeling lighter and able to walk better.

That which Tripier has called the chemical galvano-caustic of the cavity of the neck, has been defined by him as a potential cauterization of the cervical tract by the continuous current. Jouret does not regard this as in all cases indispensable, but it is necessary sometimes in consequence of the development of the glands of the cervix, forming the so-called ovula Nabothi; sometimes by the formation of hypertrophies of the mucous tissue which give origin to a thick, creamy, purulent discharge, or which, when ulcerated, cause hemorrhages. In the application of the constant current, a large plate of tin, covered with agaric or chamois which is thoroughly saturated with cold water, is placed upon the abdomen, or upon the thigh, and is the positive pole. The caustic electrode, the negative, is then introduced into the cervix, which is exposed by a speculum; if cauterization of the uterus is desired, the pole is passed into its cavity. Usually the intensity of the current is from fifteen to twenty milliampères, and the sitting is from five to ten minutes. The cauterization is, if necessary, repeated according to indications—that is, until the disappearance of the abnormal secretions arising from inflammation of the mucous membrane and from the hypertrophied glands.

Jouret states that he applies this electric treatment almost invariably in chronic endometritis, and that a long experience has led him to prefer it to any other method of treatment, because of the facility of execution and the constancy of the favorable results.

The favorable effects from faradization of the engorged uterus are so generally recognized by those treating diseases of women that it is not necessary to add a word to the commendation of this treatment given by Jouret. If a like satisfactory result can be had in chronic endometritis from galvanization by others as well as by Jouret, this hitherto obstinate disease will cease to be an opprobrium to the profession.

PROFESSIONAL REPUTATION.

THE desire of praise belongs to man in common with many of the inferior animals. The education of some of these animals is chiefly effected by appeals to this desire, rewarding, for example, the dog, when teaching him to retrieve by kind words, and possibly some food dainty; or the horse, when teaching him to stand without hitching, in a similar way. It also is of large application in educating the child. It furnishes one of the most powerful motives to industrious, philanthropic, or heroic action, on the part of the adult, no matter in what calling he is engaged. The physician is by no means exempt from the ambition for reputation; and although Milton did refer to fame as the last infirmity of noble minds, it is one of the most powerful means, not only in advancing his influence and capability for doing good, but of promoting the interests of the profession. Having in a previous number of THE NEWS made a few observations upon some of the financial aspects of a medical life, addressed more especially to those entering upon practice, we propose now, very briefly, to refer to a few points relating to professional reputation.

One thing must at this day be very obvious to the thoughtful physician, and that is, that a professional reputation cannot be so extensive as it has been in past years. The time has gone forever when a great ovariotomist, like Washington Atlee, could claim the continent as the abode of his *clientèle*, and still more remote is that when patients with stone would travel two thousand miles or more, to an interior town in Kentucky, to have lithotomy done by Dudley. The reason is, there are Atlees and Dudleys in almost every State in the Union, men who can do equally well the operations they did; and, so far as ovariotomy is concerned, with even a greater success. There is less concentration of reputation in a few individuals than there once was; there are so many competitors that the prize has been divided, and a larger number receive a share. This aspect of the question certainly is encouraging to the young physician, for the prizes now are many instead of few. How numerous the little worlds in the one great world! Some of these subdivisions are very small absolutely, but to those who dwell in them they are more than all other worlds. We read the *Smithville Weekly*, and the doings and happenings in that excellent village justly occupy a larger space than those of the greatest city upon the continent, or upon the globe; while, on the other hand, a newspaper of one of those cities may not have occasion to mention Smithville from the beginning to the end of the year, may, indeed, remain always ignorant of its existence. To be the chief surgeon, physician, or obstetrician in the latter, is something, but to occupy such position in the county is more, and in the State still more; there is a regular gradation in honor, and usually all the steps must be taken in order, none omitted, as the boy wins his first prize in the common school, then in the academy, finally in the college.

If one hopes for that larger fame which shall make his name honorably known throughout the country, and even in foreign lands, an object attained by so few, there is an aspect of the question which is not at all encouraging to the ambitious who seek laurels while they live. Many of the greatest medical reputions have been posthumous. Think of what honors are paid to the memories of Harvey, Jenner, and McDowell, and how little fame these men had during their lives. The truth conveyed in the familiar couplet as to the Greek poet has at least approximate illustrations in many medical histories:

"Seven wealthy towns contend for Homer dead,
Through which the living Homer begged his bread."

In the further consideration of the subject, we remark that the reputation sought by the young doctor is usually first among the people, and next with fellow practitioners. To secure the former, honest, wise and faithful work at sick beds is the only legitimate way. Sick people care but little about individuals or places of education, when they send for a physician, but they wish to be cured pleasantly, safely, and quickly, as the old Latin saw runs. Now he who cures thus is certain of numerous clients; he may have to wait for them, but they are coming as sure as fate. Let him beware of exciting any personal hostilities, or begetting any professional antagonisms, for success is a plant which thrives best, grows strongest and largest amid calm and sunshine, not in darkness and storms. Even if Z makes a correct diagnosis, after several or all of the preceding capitals of the alphabet have failed, and cures the patient, that is glory enough without depreciating the character of his professional associates; the time has been, when he himself made similar failure, and such time is coming again. Charity for the errors of others, and a consciousness of his own fallibility, furnish a condition of mind which every physician should have. The reputation built upon the ruins of that of another, has a very insecure foundation, and is liable at any time to fall.

So, too, the young physician should beware of criticising the practice and opinions of others. In the first place, has he all the facts and statements necessary to a just judgment? Then does he know the lessons of the personal experience of that individual out of which the opinions and practice have grown, or by which they have been modified? Finally, behind all these merely external things, there is the personality, the individual himself, and we can no more quarrel with that than we can with

the shape of his nose, his stature, or his weight. There is still another reason for abstinence from criticism by the young physician, and that is his own limited knowledge: possibly the opinions which he now holds as sacred truths next year may be divested of their sanctity and regarded as only probabilities, the next they will be possibilities, and a while after they are cast as rubbish to the wind. The *rôle* of critic is one of the highest in the profession, and belongs rather to the wisdom of old age, wisdom won by long years of careful study and patient observation, than to the hasty and imperfect generalizations and inexperience of youth; moreover, the older a physician is, the less disposed he is to criticise the work of others.

Participating in medical societies and contributing to medical publications is a legitimate means of acquiring reputation among doctors. Honest, truthful work of this sort is sure to be recognized, while falsehoods will sooner or later be known, and once a man is set down as a liar by his professional brethren, he can never acquire any desirable professional reputation. There are counterfeit notes and coins which so coarsely vary from the genuine, that their character is at once recognized, while others are so well executed that they must be subjected to an expert to ascertain whether they are true or false. It might astonish some who hasten to publish their marvellous successes in medicine, in surgery, or in obstetrics, asserting, it may be, an improbable, or even an impossible number of cases attended, or of operations performed, or results occurred, how quickly some hearers, or readers at once say, "That man is lying." In some instances, the liar for a time succeeds, but he is sure to come to grief finally; the medical shores are strewn with the wrecks of those who sailed under false colors, and while some may pity, none are so poor as to do reverence to these wrecks.

It is doubtful whether work done in societies or journals solely for the purpose of getting practice has received that condemnation it deserves. A man had better hold his tongue unless he can speak, or believes he can, for the instruction of others, and any bidding for practice is not reputable. A monograph upon a prevalent malady, proclaiming the author's experience with it, and his facility and success in treating it, mailed at his own expense to thousands of practitioners, is scarcely less an invitation for sending patients than that of the professor who throws his arms around the candidate for gradution, exclaiming, "My dear fellow, I am delighted with your examination. Send me all your consultations."

The young physician should beware of making the secular press his ally. The better class of the profession shrink from newspaper notices, and are naturally suspicious of the ability, or of the moral characters of those whose names are frequently found in connection with patients attended or operations performed by them; newspaper doctors are, as a rule, quack doctors. Our great cities are not without some who thus endeavor to herald their professional exploits, but they are not recognized as the gentlemen of the profession, nor do they deserve success; sometimes this yearning for publicity arises from an overweening vanity, whose possessor is never happy unless people are talking about him, or from a desire to impart new life to a dying fame, just as the woman whose charms of face the years have taken away endeavors by enamelling and coloring to hide the wrinkles of age and restore the beauty of youth.

But no matter where or by whom done the reputation thus gained is very liable to be shortlived. On the other hand, the reputation founded in the grateful hearts of those whom he has relieved by his skill, and comforted by his kindness, founded, too, upon honest and useful contributions to medicine, and upon just and courteous treatment of fellow practitioners, is that to which the young physician should aspire, for it is that alone which endures.

THE FUNCTIONS OF THE THYROID GLAND.

THE relations of the thyroid to myxœdema, and the induction of a cretinoid condition after the extirpation of goitres, have stimulated physiologists to study anew the functions of this gland. J. R. EWALD, of Strassburg, records some remarkable experiments in the *Berliner klin. Wochenschrift*, No. 11, 1887, which, without leading to any positive conclusions, indicate the direction which research may take. In the dog removal of one thyroid—the two halves are distinct—is not followed by any symptoms. After double extirpation remarkable phenomena occur in three or five days. As discovered by Schiff, there are curious periodic contractions of the muscles, sometimes general, over the body, but, according to Ewald, usually confined to two regions, the muscles of the shoulders and the temporals. The contractions induce a stony hardness of the muscles and follow each other with great rapidity.

Another curious symptom is the vermicular movement of the lingual muscles. The animals are apathetic, move slowly, and are with difficulty aroused. Schiff holds that the thyroid forms a material necessary for the nutrition of the central nervous system, and the following experiment of Ewald's indicates that the fresh gland contains an active principle capable of profoundly influencing the brain. If the expressed and filtered juice of the recently removed gland is injected subcutaneously in a dog, the animal, in about three hours, falls into

a curious hypnotic state, standing motionless, taking no notice of anything, and allows the limbs or head to remain in any position in which they are placed. After persisting for an hour and a half or two hours the condition passes away and the animal recovers. There is no fever. A number of control experiments were made with the juice of other parts of the body, but this remarkable phenomenon never occurred except when that of the thyroid was used.

Whether this material, whatever may be its nature, which influences so strongly the nerve centres, is elaborated in the gland or is only excreted by it from the blood cannot be definitely stated. On the latter view the changes in myxœdema and after thyroidectomy may be regarded as the result of a slow poisoning of the system by material which it is the function of the thyroid to remove or render inert.

DEATH IN LABOR FROM DYSPNŒIC URÆMIA.

THE so-called uræmic intoxication, as it occurs in a woman in pregnancy, during or after labor, may have different manifestations. CHARLES, in the *Journal d'Accouchements* of April 15th, narrates the case of a primigravida at the eighth month of twin pregnancy, who died from asphyxia. She had been anasarcous from about the middle of gestation, the anasarca being most marked in the lower limbs and the external genital organs, but there was no albumen in the urine. She was suddenly attacked with difficult respiration and great præcordial distress; meantime labor came on, though the pains were not severe, and the os dilated slowly. She gradually became cyanosed, but her intelligence was not impaired, and there were no convulsions; in a few hours she died undelivered.

Whether the explanation of death given in this case is correct or not, the history illustrates the dangerous consequences of what Stoltz and his pupils have described as the serous cachexia or hydremia of pregnancy, a condition which, though entirely neglected by some authors of works upon obstetrics, we believe demands a prompt recognition and as faithful treatment as does albuminuria in the pregnant woman.

THE ninth annual meeting of the American Climatological Society will be held at Baltimore, on Tuesday and Wednesday, May 31st and June 1st, and we understand that interesting papers have been promised by Drs. Loomis, Trudeau, Westbrook, Shattuck, Donaldson, Musser, Curtin, and Reed, all on phthisis in one or other of its phases. Drs. Rice and Peale will make reports on mineral springs, and Dr. Linn on some health resorts.

THE State Medical Society of Wisconsin will hold its forty-first annual session at Oshkosh, commencing on Tuesday, May 3d, at 8 P.M., under the presidency of Dr. S. C. Johnson, of Hudson.

AMERICAN NEUROLOGICAL ASSOCIATION. — The American Neurological Association holds its thirteenth annual meeting at Long Branch, N. J., on July 20th, 21st, and 22d.

THE annual commencement of the University of Pennsylvania was held last Monday, and the degree of M.D. conferred on ninety-nine graduates. THE MEDICAL NEWS prize of $100 for the best graduation thesis was by the award of the Medical Faculty divided between Arthur C. Hugenschmidt, of Paris, France, and Peter J. J. Martin, of Pennsylvania.

At the annual meeting of the Alumni, held in the afternoon, Dr. Alfred Stillé was re-elected President.

REVIEWS.

A MANUAL OF OBSTETRICS. By A. F. A. KING, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D. C., etc. Third edition. 12mo. pp. 379. Philadelphia: Lea Brothers & Co., 1886.

Since this little book first appeared, it has been gradually growing in size, and increasing in the number of its illustrations; presenting now forty more pages and forty-three more woodcuts than in the second edition of 1884. The volume is more attractive in appearance, and embraces a larger range of subjects, which are, of course, treated in very few words. Its popularity is evinced by the fact that a third edition has so soon been called for. Manuals should never take the place of more comprehensive treatises, but may serve a good purpose as ready remembrancers to busy country practitioners, and are often much better for their use than many of their antiquated works, which are apt to be behind the age.

The author has fallen into some of the errors of Playfair, viz., "hydatiform pregnancy," instead of hydatidiform, or like a hydatid. "Spondylolithetic pelvis," for spondylolisthetic, or a slipping of the vertebra. Both of these were corrected in the last American edition, and the Greek derivation of the latter given in a footnote. By a recent English review, we notice that Dr. Playfair has renewed the latter error in his last edition, and been taken to task for it.

Under the "Cæsarean section," nothing is said of the new method of Sänger, in its present simplified form, for closing the uterine wound; or of the largely diminished fatality under it. No spray is used in this operation, and no drainage tube is required, as there should be no leakage. The average time required is one and a quarter hours, and from twenty to thirty-seven sutures have been used by different operators. Dr. Lusk, in his recent successful case, inserted thirty-four. We must differ with Dr. King, when he says that the relative merit and danger of the Porro operation, when compared with the Cæsarean section, is "so unsettled as not to admit of either statement or discussion in his work."

With fifty-two operations and thirty-seven recoveries under the improved Cæsarean method, a fair comparison may be made.

What is called Simpson's method of treating placenta prævia, was used by Dr. Ruschenberger, of Philadelphia, fourteen years before the Edinburgh professor recommended it; the lady saved being the wife of a Peruvian army officer. We are glad to see the advanced views of the author in reference to the employment of laparotomy after uterine rupture; in our judgment the abdomen should be opened and cleansed, and the uterine rent sutured in all cases of laceration where the state of the woman will admit of it, even if she has been delivered *per vias naturales:* and we believe that the present advances in abdominal surgery will bear us out in this opinion. To deliver the fœtus is to leave the work only half done, if we expect to save the woman.

SOCIETY PROCEEDINGS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, April 27, 1887.

H. AUGUSTUS WILSON, M.D., IN THE CHAIR.

DR. CHARLES H. BURNETT read a paper on

EAR-TRUMPETS.

There are three reasons, he said, why the deaf should use ear-trumpets:

1. In order to aid the hearing. 2. To improve the hearing. 3. For the convenience and comfort of those conversing with the very deaf.

1. When a person becomes very deaf in both ears, some resort to an artificial aid of hearing must be made. So long as one ear remains fairly good, patients will not use an ear-trumpet for the deaf ear. But when ordinary tones near the ears are heard either very imperfectly, or not at all, the sufferer gladly resorts to some form of ear-trumpet. Most of these are unpleasant and imperfect aids, from their disagreeable resonance, and poor conducting powers. They also bruise the meatus, in most cases being made with an ear-piece which fits into the mouth of the auditory canal. These discomforts and imperfections, in the average ear-trumpet of all forms heretofore invented, added to the natural indisposition to employ an ear-trumpet because of its conspicuousness, have in most cases led to an early abandonment, or a partial use at least, of such an instrument.

The cause of ordinary deafness is, in most cases, a catarrhal thickening of the mucous membrane over the ossicles and the inner surface of the membrana tympani, leading to more or less ankylosis in these parts. Passive motion overcomes in them, to a greater or less extent, the immobility induced by this sclerotic process, as it does elsewhere in the osseous and muscular system. The form of passive motion which acts most naturally on the ossicula auditus and their joints, is sound. If, therefore, sound-waves are concentrated in more than usual quantity or vigor upon the stiffened membrana and the ossicles, as by means of an ear-trumpet, hearing is induced, if the auditory nerve is unimpaired. If the latter is impaired, no form of ear-trumpet will be of use.

2. Not only does such a form of passive motion give immediate relief to the deafness in most cases, but such a form of passive motion, acting frequently and systematically upon the ear, prevents further ankylosis in the conductors, and fatty degeneration of the auditory nerve from desuetude, This, of course, tends to a permanent improvement of the hearing, and, in some instances, patients come to hear at last without a trumpet. If such a force were brought to bear early in cases of deafness from ankylosis in the ossicula, the defects in hearing could, in most cases, be arrested, and, to some extent, removed. This form of aid to hearing has its happiest results in very deaf children, in whom the loss of hearing often entails loss of speech, if they have already learned it. If they have not learned to talk, and their deafness depends on catarrhal disease in the middle ear, and not on a lesion of the acoustic nerve, the use of a good ear-trumpet will rescue them from entire deaf-dumbness.

3. The convenience and comfort of those who communicate with the deaf by means of a trumpet are not the prime, though important considerations. For, if this mode of conversation is rendered difficult by reason of the imperfect ear-trumpet at command, it will not be readily or willingly employed, and, in the case of children, therefore, not enough will be said to them to improve their hearing or to teach them speech.

The most useful ear-trumpets yet presented to his notice are those of Mr. Maloney, who exhibits them here to-night. They are not only useful as conductors of sound, succeeding where other forms fail, but they do not fit into the meatus. They are held to the ear, the aural end of the instrument being supplied with a disk, and not a tip for the meatus. This does away with bruising the canal, or exciting furuncles in it, so common in the employment of the forms heretofore in use. They have been devised in a scientific manner, and introduced to the profession on their own merit. The best results, or the most signal ones, have been obtained by the so-called silent instrument. This is simply because it is the most powerful, and hence renders most aid to the very deaf, the only people who are really willing to use any instrument. The smaller instruments are just as good for those not very deaf, and, if used by such patients, would aid in the retention of hearing, and tend to cure their hardness of hearing, as he has shown. But the less afflicted class seem unwilling to use any form of ear-trumpet. All ear-trumpets of any value must possess some size in order to contain a column of air sufficient to impress the drum. They must be larger than the auricle with which the patient is already supplied. Hence, all invisible appliances, so-called, are self-evidently good for nothing.

MR. J. A. MALONEY, of Washington, said that he commenced his labors in "Aural Mechanics," with a mode of procedure as follows:

1st. To develop instruments as far as he could to meet the various phases of defective audition.

2d. To construct the instruments to give satisfactory results without entering the auditory canal.

3d. To use artificial drums or membranes to guard against impact of air upon the "membrana tympani," and prevent reverberation, so common in all the old forms of instruments. He decided that a scientific instrument should possess these three essential qualities: it should be large enough to be of practical value; it

should augment sounds: but with such augmentation the "timbre" or quality of sound should be preserved.

We are all aware that the membrana tympani, unlike other stretched membranes, responds to all vibratory motions within a certain limit, whether they are in the form of noise or of composite tones, transmitting through the intermediate agencies of the middle and inner ear, to the nerve of hearing auditory sensations. Could a stretched membrane be arranged, so closely imitating in function the one given to man, as to show how beautiful are the harmonies of nature?

After experimenting twelve months, he adopted the form of membrane which he presented. The reason for its adoption came about in this way: In the early stage of his experiments he invariably found a lack of clearness of tone, until one day the thought occurred to him that he could secure uniformity of tension by clamping the membrane between two rings. When this was done, he found it a great improvement over all other methods, and consequently adopted it after thorough tests. Even after obtaining good results, he could not but feel that there must be some other result produced by the rings than that of maintaining a uniform tension of the membrane. He found that while the membrane was upon the stretcher-frame, with the rings glued upon each side of it, like any other membrane, it would be thrown into sympathetic vibrations by tones corresponding to its fundamental; *but that when cut from the frame*, and dependent for its tension upon the two rings alone, it would not respond to a tone corresponding to its fundamental. Now it has been thought that the last named feature exhibited by the membrana tympani was produced by its union with the auditory ossicles. But may it not be due to two facts? 1st. That the margin is thickened. 2d. That the middle layer, or "substantia propria," is fixed to a ring of bone.

His membrane describes a central vertical line between the two rings acting as clamps, and the rings themselves represent the ring of bone to which the middle layer, or "substantia propria," of the membrana tympani is attached. In the construction of the instrument, the fact must be borne in mind that it must be arranged to suit and compensate for the defect of hearing. 1st. Arrange for high tones, if the defect is in that direction; or for low tones, if the defect is in that direction. 2d. The augmentation and clearness must be to the extent that the person will hear every word spoken, instead of a word here and there, as heretofore, which involves a severe mental strain to construct the incomplete sentences.

DR. S. S. COHEN said he had the pleasure of seeing, some time ago, a demonstration of these instruments in the case of some patients of Dr. J. Solis Cohen, and they acted very satisfactorily. A letter was received some time ago from Dr. Lacharrière, of Paris, the eminent physician in charge of the National Institution for Deaf-Mutes, inquiring as to the truth of reports that in certain institutions in this country, especially in New York, ear-trumpets were being used in the instruction of so-called deaf-mutes and that it had been found that a gratifying proportion of children thought to be totally deaf, reacquired in this way a certain degree of hearing power. After some correspondence he learned that Mr. Currier, Professor of Articulation in the Deaf-Mute Institution at Washington Heights, New York, had used an instrument different in construction from that of Mr. Maloney, with good results. He published accounts of them in the *Annals of the Deaf and Dumb* for January and for October, 1885. He reports a number of cases that have acquired the power to carry on conversation. Mr. Currier uses what is termed the "conical conversation tube," attaching two mouthpieces and tubes to a single earpiece, in order that the patient may hear his own voice as well as that of the instructor. His system of instruction to reawaken so-called "latent hearing" is ingenious, and, from his reported cases, apparently quite successful. If Mr. Maloney's earpiece was attached to Mr. Currier's double tube, it might be found still better.

DR. C. WIRGMANN asked if there were any liability for the rubber disk to get out of order?

MR. MALONEY said, with reference to the durability of the rubber, that it has a protective coating. During the past nine months he has exposed them to varying changes of temperature without any apparent effect. If the membrane should get out of order it can easily be replaced. He had never had his attention called to the instrument of Mr. Currier until the matter was mentioned by Dr. Cohen this evening. He finds that his instrument is open at both ends. In speaking of what he terms No. 3, or "silent," instrument he neglected to state that it is closed at the end nearest the ear. The object of this is to prevent the impact of the air on the drum of the ear. Such impact has a tendency to destroy the clearness of the tone. With his instrument the only impact on the "membrana tympani" is that of the column of air in the auditory canal between the membrane of the instrument and the drum of the ear, thereby developing *true auditory sensations*, which cannot be produced by instruments open at both ends.

While he has done something in the way of testing those supposed to be entirely deaf, he was not prepared, without his notes, to speak on this subject, because he has not yet finished the line of tests marked out. He could say, however, that he has made tests in two cases supposed to be totally deaf and dumb. One was a man, forty-two years of age, and deaf from childhood. He made him hear on both sides, *noise only*, for the percipient functions had never (as in such cases) been trained or educated. The other was a boy, eleven years of age, supposed to hear very slightly on one side only. Upon making tests he found he could hear on both sides, *noise only*, for the same reason as mentioned in the foregoing case. When he completes the line of tests marked out he shall be glad to present the results to the Society.

DR. C. H. BURNETT said that the question of so-called latent hearing in deaf-mutes is, of course, very important. In one sense, there is no such thing as latent hearing. Without doubt, many deaf children lose the power of talking if they have previously acquired it, or fail to learn to speak on account of their inability to hear. In the case of a graduate of two deaf-mute colleges, the man's wife discovered that he could hear to a certain extent, and by systematically talking to him, he acquired the power of hearing an ordinary tone of voice while in an adjoining room. This case was reported to him by Mr. A. Graham Bell, of Washington. In most cases, deafness is due to ankylosis, and the use of an ear-trumpet is simply another application of the movement cure.

He has himself seen a child a little over two years of age, just learning to talk, lose its hearing to a marked degree. By persistent teaching on the part of the mother the hearing was much improved, and the child was rescued from a condition of deaf-dumbness. The child is now twelve or thirteen years old, and while the hearing is not perfect, she is far from being a deaf-mute. Many deaf-mutes can hear something. It is very onerous for even a parent to exercise the hearing by the unaided voice, but with an instrument, like those of Mr. Maloney's, the parent may be induced to undertake the task.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 18, 1887.

THE PRESIDENT, JOHN SHRADY, M.D., IN THE CHAIR.

CARCINOMA OF THE PANCREAS.

DR. THOMAS C. TAYLOR reported a case of carcinoma of the pancreas, with infiltration of the omentum and walls of the stomach, along the greater curvature, occurring in a female thirty years of age. The case, he said, he presented for the reason of the infrequency of the affection, and the obscurity as regards its diagnosis. Perhaps, however, such cases were not as infrequent as was generally supposed, since many patients died with symptoms similar to those met with in the present instance, which were attributed to some other disease; whereas, had autopsies been made, the primary cause of death might have been found in the pancreas.

In the case in question, he said, there were absent three important and common symptoms, generally regarded as diagnostic of cancer of the pancreas, viz., jaundice, œdema, and fat in the alvine discharges. According to Dr. Norman Moore, in the *St. Bartholomew's Hospital Reports*, jaundice was always found where the pancreas was the primary seat of a new growth. In ten cases coming under his observation, in which post-mortem examinations were made, jaundice was found in all. Sir Charles Murchison also referred to persistent jaundice as a common symptom of the disease; but Dr. Louis Starr had shown that it was of clinical importance to note that the ductus choledochus does not always pass through the head of the pancreas, but sometimes merely passes over it. When this was the case any enlargement of the pancreas would simply push it aside without giving rise to any jaundice. According to Nyss, this happened fifteen in twenty-two times.

Œdema occurred, according to the majority of authorities, in more than half the cases of cancer of the pancreas recorded; while fat in the alvine discharges was said to be found in nearly all the cases. The same condition, however, might occur, according to Reynolds, when the duodenum, and not the pancreas, was diseased. Dr. Taylor said that he had been unable to find any authority who gave even one pathognomonic sign, and, therefore, he thought that Da Costa's manner of diagnosticating these cases was the most feasible, that by exclusion. As to the invasion of the stomach in the present instance, according to Pepper, this disease rarely extended to the stomach, but rather affected the neighboring lymphatic glands, the duodenum, and the liver. In regard to the possibility of prolonging, by operative procedure, the life of a patient suffering from cancer of the pancreas, provided the diagnosis could be made out sufficiently early, he thought that the two cases reported by Billroth were of much interest, where he had made a partial resection of the organ, removing the tail in one and a portion of the head in the other, but, of course, not injuring the duct. Both patients recovered from the immediate effects of the operation, but how long they lived or whether the disease returned, he did not state. Dr. Taylor thought that when he first saw his case, but a very small portion of the head was involved, and that if the diagnosis could then have been established, it would have been an excellent opportunity to perform an operation similar to that of Billroth.

DR. WM. T. LUSK read from notes the report of a

SUCCESSFUL CASE OF CÆSAREAN SECTION.

Bridget C., aged twenty-four, Irish, domestic. She was sent, March 21, 1887, to Bellevue Hospital, on account of deformity of the pelvis resulting from hip disease. The latter dated from the time when she was eleven years old, and on account of it she was sent to the hospital at Dublin, at that time, for treatment. She was discharged cured; but during her pregnancy she noticed some suppurative discharge from the old sinuses which had formed at that period.

On March 22d, on examination, much to his surprise, he discovered that she was already in the early stage of labor. The pelvis was of the Naegele oblique type, and its measurements were as follows:

Distance between the anterior spines, 21½ centimetres. Distance between the cristæ ilei, 24 cent. External conjugate, 16 cent. Distance between anterior and posterior spines, right side, 14½ cent. Distance between anterior and posterior spines, left side, 16 cent. Diagonal conjugate, 9 cent. Internal conjugate (estimated), 7.5 cent. Distance between ischia, 6.5 cent.

The shortening of the right leg (measured from the trochanter to the malleolus) amounted to 4 centimetres. On the right side the iliac bone ran in a nearly straight line, and on the left the curve was greatly diminished.

With the sanction of Drs. Isaac E. Taylor and H. J. Garrigues, who saw the case in consultation, he determined to perform Sänger's operation. Craniotomy is generally considered comparatively simple; but with the dimensions that were found in this case he had no doubt that the dangers from it would be greater than that of Cæsarean section, provided the latter was performed sufficiently early. Dr. Taylor was of the opinion that the case was nearly identical with one in which Dr. Lee performed craniotomy and where the patient died. Dr. Lusk also referred to a similar case in the practice of Dr. Studley, where the pelvis was fractured in the effort to deliver the child.

As the patient was already in labor, he determined to operate at once. Both the private pavilions of the hospital were occupied, and he was accordingly obliged to perform the operation in one of the wards. The examination was made about noon, and at 3.30 P.M. the operation was commenced. The abdominal incision was made through the linea alba, and extended from three inches above the umbilicus to a point two or three fingers' breadth above the symphysis pubis. The peritoneum having been slit up, the left cornu of the uterus came up into the wound, and the organ was everted by press-

ure with the hands over the abdominal walls. When the uterus had thus been turned out, the intestines were placed beneath the abdominal walls and retained by a flat sponge, and the uterus was wrapped in warm towels; a solution of bichloride of mercury, 1 : 10,000, being used. A rubber tube was then placed around the lower segment of the uterus in order to prevent hemorrhage. In opening the uterus an incision two inches long was made near the lower segment, and with the scissors the opening was afterward increased to five inches. Owing to the pressure upon the vessels secured by the elastic ligature, the incision was nearly bloodless. It was followed by a hernial protrusion of the membranes through the opening.

The child was found with the head presenting in the left occipito-anterior position, and on being extracted was in a cyanosed condition. Through the well-directed efforts of Dr. A. B. Ball, however, it was resuscitated. With the finger the membranes and placenta were readily separated; the delicate cobweb-like processes connecting the decidua with the residual portion of the mucous membrane remaining adherent to the uterus, described by Leopold, were at this time beautifully exhibited. The uterus remained of a pale, waxy color, on account of the constriction of the elastic ligature.

In closing the uterine wound thirty-four carbolized silk sutures were employed, of which sixteen were deep and the rest superficial. In the deep sutures, he said, special pains should always be taken to avoid the mucous membrane of the uterus. The Lembert suture was used in making the superficial sutures. When the rubber tube was removed from the uterus the blood slowly returned to the pallid organ. At first it assumed a delicate rosy hue, and finally a deep purple color. A very slight oozing was observed at one point. The uterus was then returned to the abdominal cavity, and a drainage tube inserted behind the organ. It was impossible, however, to pass the tube into Douglas's cul-de-sac, owing to the pelvic contraction. Silver wire sutures were employed to close the abdominal wound. At the end of the operation the patient was in excellent condition. The operation lasted altogether one hour and fifteen minutes, and twenty minutes of this time were taken up in the effort to stop the oozing referred to.

For two days after the operation the temperature did not go as high as 100°. Then there was a little tympanites, and it went up to 101½°; but a Seidlitz powder had the effect of promptly reducing it again. The highest temperature was reached on the fifth day (102⅘°), but fell, however, to 100½° after a spontaneous evacuation of the bowels. On the sixth day the drainage tube was removed. Immediately after the operation the discharge from it was stained with blood, but it soon became colorless. Dr. Lusk said that the tube was not probably needed in this case; but at the same time there was a certain feeling of security in knowing that it was in position. On the day following the removal of the drainage tube there was some oozing from the opening left by it. At the end of a week the abdominal sutures were removed. At this time the temperature would usually go up to about 100½° in the evening, and then fall again by morning.

On the ninth day some fluctuation was detected in the line of the abdominal wound, and a little pus was evacuated; after which the temperature became nearly normal. At the end of two weeks, however, the temperature went up to 101.6°. Still, no trouble whatever could be discovered about the abdomen, and as the patient complained of pain in the right hip, an examination was made which showed an accumulation of pus in the site of the old sinuses which had given the trouble during the patient's pregnancy. Accordingly a knife was inserted, and about a pint of pus evacuated. Since that time the woman had been in most excellent condition. Ever since the second day, by which time she had recovered from the effects of the ether given for the operation, she had been able to take abundant nourishment. She passed her water freely, was comfortable in every way, and on the whole seemed to think it rather an easy way of having a baby. The baby now weighed nine pounds, and was also doing finely.

DR. SILVA, lately house-surgeon in Bellevue Hospital, who had had charge of the case, stated that the patient did better than any other case of laparotomy that he had the opportunity of observing during his service at the hospital.

DR. THOMAS KEARNEY inquired whether it would not have been better in such a case as this to perform Porro's or Tait's operation, in order to prevent the woman's becoming pregnant again.

DR. LUSK replied that Harris's statistics showed that with the Sänger operation (modified more or less from the original procedure proposed by Sänger) there were over 70 per cent. of recoveries, while in Porro's operation the recoveries were only 40 per cent. It was, therefore, unquestionably a more dangerous operation. In regard to Tait's operation, it seemed to him that the additional risk to which the removal of the ovaries subjected the patient rendered it inadvisable, the extremely vascular condition of the parts constituting a serious objection. At all events he should not like to attempt this, in addition to the Cæsarean section, unless he had time to consider the matter very carefully beforehand, and in the present instance the operation was undertaken in a very hurried manner, as he had no idea that he would find labor actively commencing at the time he made his first examination of the patient.

DR. J. R. MACGREGOR said that he had been with Dr. Studley at the time that the fracture of the pelvis referred to by Dr. Lusk, occurred. The patient had ankylosis of the right hip, with a projection inward of the ramus of the pubes on that side; but it was thought that she could be delivered *per vias naturales*, with the aid of artificial assistance, until the accident occurred. The patient died, though not immediately.

DR. SILVA said that in *The American Journal of the Medical Sciences* for 1879, N.S., lxxvii. 43–65, Dr. Robert P. Harris, of Philadelphia, had published statistics of one hundred cases of Cæsarean section, and out of nineteen of the cases, occurring in dwarfs, only one mother and five children were saved. In all of these cases the operation was only undertaken as a last resort, when the patient was utterly exhausted, and the results certainly afforded ample proof of the importance and desirability of early surgical interference.

DR. C. S. WOOD said that in the course of his experience he had performed three craniotomies, and this class of cases was without doubt as disagreeable and

repulsive as one could possibly meet with. If, therefore, by this operation it was possible to save more mothers than by craniotomy, it would be a great boon. Thus far, however, the statistics unfortunately showed that it saved a far smaller proportion of mothers. In two of the cases of craniotomy that he had met with the mothers recovered, while in the third the mother was lost. Yet in one of the successful cases he labored under great disadvantages, as, not expecting to be called on to perform craniotomy, he had no instruments for the operation, and was so situated that none could be obtained at such short notice. Under these circumstances he resorted to the device of manufacturing such rough instruments as he was able from some shoemaker's tools, and he thought the case was interesting as showing what might be accomplished by very simple means sometimes in an emergency.

There seems, he said, at present to be gaining ground a sentimental notion that it is of the greatest importance to save the child, but he was one of those who believed that the mother should always be saved at all hazards, whether the child was sacrificed or not; and as long as it could be shown that more mothers' lives were lost by the Cæsarean section than by craniotomy, he thought the latter should be preferred.

DR. KEARNEY said that he could not agree with the views expressed by the last speaker. Dr. Bedford, he thought, had given the most rational statistics, and if, as was undoubtedly the case, it could be shown that in the aggregate more lives (of mothers and children taken together) could be saved by Cæsarean section, it should without doubt have the preference over craniotomy. The matter was not merely one of sentiment, it was more than that, and involved a question of deep ethics. By simple logic alone the justice of the Cæsarean operation could be established, and he had never yet seen the objections against craniotomy adequately answered by any author with which he was conversant.

DR. LUSK said that if in speaking of Cæsarean section reference was made to the old operation, as it had usually been performed, unskilfully or carelessly, and when the patient was already in a dying condition, the mortality was without doubt very heavy. It was a fact that in most of the cases it was resorted to only when the woman was moribund, when all other methods of delivery, craniotomy included, had been exhausted. When it was remembered also that a rude and careless way of operating had also been the rule, it was no wonder that the patients died, and that statistics based on such cases bore heavily against the value of the procedure. But even under all these disadvantageous circumstances, a few cases had recovered.

At the present time it is getting to be understood that the operation should be performed, whenever this is possible, under more favorable conditions and in the same careful way as other surgical procedures involving the abdominal cavity. The operator should take sufficient time to make out the pelvic diameters and consider fully the risks that would be encountered in performing craniotomy. If, having done this, he decides that the Cæsarean section offers the best chance of success, he should make his preparations as deliberately as the circumstances of the case will allow, and perform the operation by methods in accordance in every particular with the precepts of modern antiseptic surgery. When this course was pursued, the results were infinitely more satisfactory than those met with in the old operation, as was shown very clearly by the cases of Leopold, for instance, who, if he remembered rightly, had operated ten times with only one death. Even the case that he had lost Leopold thought that he would now have been able to save, in the light of his later experience. Very few obstetric surgeons, Dr. Lusk thought, could show a result of 90 per cent. of recoveries in their cases of craniotomy. Within the last eighteen months Harris had collected 52 cases of Cæsarean section, with 71 per cent. of recoveries; while the best results of craniotomy in these difficult cases showed only 60 per cent. of recoveries. Still, he was quite aware that too implicit reliance was not to be placed in statistics.

Other operators besides Leopold had reported a number of successive cases without a death. One great reason for the gratifying success of the modern operation, Dr. Lusk believed to be the use of the rubber ligature, which so effectually prevents hemorrhage from the severed uterine structures. When this is employed the surgeon can go to work very deliberately, and bring the edges of the wound together with the greatest acccuracy. In his own case there was absolutely no symptom during the lying-in period which was referable to the uterine wound. In conclusion, he would only say that if we were to wait until the woman was dying, instead of interfering early, as in this instance, we should only have the old statistics repeated.

In reply to an inquiry as to what he thought of the operation of laparo-elytrotomy in these cases, he said that this procedure is particularly adapted to a special class of cases, viz., when the head is arrested at the brim of the pelvis and the cervix is already dilated, or in a dilatable condition. If, however, after laparo-elytrotomy we were obliged to extract the child through an undilated cervix, it became a very serious operation. In case, therefore, we desired to operate early, we had to do it at a time when the conditions favorable for laparo-elytrotomy did not exist. Of the twelve cases of this operation which had been reported, six had resulted in recovery and six had proved fatal; the latter being cases in which success was impossible from the conditions existing at the time.

AMPUTATION OF THE PENIS FOR EPITHELIOMA OF THE GLANS AND PREPUCE.

DR. J. R. MAC GREGOR presented a portion of a penis which he had amputated about six weeks before for epithelioma of the glans and prepuce. This variety of cancer, he said, is very interesting, not only as regards the result to the patient, but also from its special pathological features. In this case there was a great deal of thickening, and there was marked increase of the connective tissue of the part. At the time of the operation much care had been taken to prevent any subsequent constriction of the urethra at the end of the stump, and thus far the result had been altogether satisfactory. The chances were also fair, he thought, that there would not be a reproduction of the growth.

DR. GOULEY said that it was an interesting fact that in epitheliomatous growths of the glans or prepuce there was always antecedent balanitis or balano-prostatitis,

and the greater proportion of cases occurred in individuals who were the subjects of chronic balanitis. This condition was, for the most part, due to the lack of cleanliness on the part of the patient, allowing of the accumulation of smegma behind the glans, and at first there was simply an alteration in the normal epithelium. Later this went on to be developed into this peculiar form of carcinoma, and the proliferation was rapid enough not only to involve the mucous membrane, but to extend to the cavernous bodies of the penis.

So far as his experience goes to show, the amputation operation usually resorted to in this class of cases is insufficient, and is apt to be followed by a recurrence of the disease more or less rapid; this new development always occurring at the end of the stump. It also is sometimes met with in the lymphatic glands. Atresia of the extremity of the urethra is apt to be a very unpleasant consequence of the amputation of the penis, and Dr. Gouley related a case which first came under his notice when he was a hospital interne, in which, although there was no return of the epithelioma whatever, the patient died of pyelo-nephritis resulting from this atresia following the ordinary amputation operation; the fatal issue occurring within two years after amputation. About 1860, having occasion to amputate a penis for epithelioma, he first used the écraseur to break up the cavernous bodies. Then, leaving the urethra fully three-quarters of an inch longer than the stump, he fastened the urethra to the free extremities of the cavernous bodies. By this and other devices, therefore, it is not difficult to avoid the atresia referred to.

In consequence of the frequency with which the epitheliomatous growth recurred, however, he finally made up his mind that in the next case that he had he would excise the whole penis, and, accordingly, in April, 1878, resorted to this procedure in a patient fifty years of age. He dissected out the entire penis, without opening the cavernous bodies; removing the crura and all. In this instance about one-half of the cavernous bodies had been involved in the disease. The patient was discharged cured on the 11th of June following; but he was unable to say what was the subsequent history of the case. Having exhibited this penis preserved in alcohol, Dr. Gouley went on to say that it seemed to him that a radical operation of this kind gave the patient the best chance of avoiding a recurrence of the disease; for if the slightest cancerous deposit were allowed to remain, the growth was sure to go on developing again. He believed, therefore, that in the majority of cases it is not only justifiable, but the most proper measure to adopt. It seems like a formidable operation, but in reality it is not, and in the case in which he performed it the patient made a rapid recovery after it.

DR. JOSEPH D. BRYANT said that he had had some experience with amputation of the penis, and he recalled three cases of it in particular very distinctly. In two of them the operation was performed for cancerous disease involving the glans and anterior portion of the penis, and in the third for general carcinoma, involving not only the penis, but the whole system. The latter, as a case of remarkable interest, he related in detail. At the autopsy it was found that there was scarcely an organ in the body which had not been invaded by the cancerous disease. The kidneys were probably the starting-point of its development, and even the spinal cord was among the structures involved. One of the other cases referred to was a young man of twenty-five, who attributed the origin of his trouble to a woman with whom he had had intercourse, whom he believed to be affected with the same disease.

In these cases he had performed the amputation just in front of the scrotum; cutting the spongy body three-quarters of an inch longer than the corpora cavernosa, and attaching the integument to its extremity. He said that he was fully of the belief that the entire removal of the organ was the only ultimately safe procedure. He could understand, however, that if the growth was very slight, it might be allowable to consult the patient's wishes on the subject, and if he objected, make the amputation pre-scrotal.

CORRESPONDENCE.

IS THE TREATMENT OF CONSUMPTION BY MEANS OF SULPHURETTED HYDROGEN AND CARBONIC ACID GAS A NEW IDEA?

To the Editor of THE MEDICAL NEWS,

SIR: Prior to the beginning of the nineteenth century a Dr. Saiffert, of Paris, introduced a treatment in that city, or at least used it, which attracted a great deal of attention, and for the time being gave him considerable notoriety. It consisted in placing the consumptive patient in a cow-stable in close proximity to several cows, and in such a position as to expose him thoroughly to the vapors arising from the manure. In fact, the bed was so arranged that the liquid manure might stagnate underneath it. In this way he cured cases of consumption that had progressed to the last stages. He was much criticised by the profession and scoffed at by the people, but nevertheless continued his plan of treatment with some success.

In 1799 Dr. Thomas Beddoes, an English physician of some fame and a somewhat noted author in his day, introduced the plan of treatment into England and Ireland. He recorded some successes, and in 1803 published a book in which he gave details and set forth his idea of the *modus operandi*.

On page 40, in a foot-note, he says: "Alkaline vapors, sulphuretted hydrogen gas, and carbonic acid gas were very conspicuous in their effects. The nature and proportion of these gases require further examination."

On page 51 he says: "The principle on which I conceive the cow-house vapors to have acted is well understood in the treatment of ulcers; certain applications disposing them to heal. And what way is there, upon which we can depend, of making applications to pulmonary ulcers, but that which gases and vapors offer us?"

The plan of treatment apparently became somewhat popular in France, England, and Ireland, and even crossed over to America. Even at this day an idea exists among the people that sleeping in a cow-house will cure consumption. A few years ago, when I was myself suffering from a lung trouble, I was several times advised by laity to avail myself of this plan of treatment.

LAWRENCE F. FLICK, M.D.

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NEWS ITEMS.

A PHYSICIAN AS SPEAKER OF THE ONTARIO LEGISLATURE.—We are pleased to learn that Dr. Baxter has been elected to the office of Speaker of the Ontario Legislature. This mark of distinction will be gratifying to the profession at large, for while it has always a good representation in Parliament, the places of honor have mostly fallen to the law.—*Canada Lancet*, April, 1887.

CHANGES IN THE FACULTY OF VIENNA AND THE RULES FOR THE ADMISSION OF FOREIGN STUDENTS.—Professor Max Gruber, of Graz, has been appointed Extraordinary Professor of Hygiene. It has been decided that the vacation courses are only to be open to foreign medical men in cases where the full number of the classes is not made up by Austrians. This may prove rather a serious matter for some of the English and Americans who frequent the Vienna Hospital for the short courses, for which it is famous.

THE SUCCESSOR OF PROFESSOR SCHRÖDER.—Privy Councillor Olshausen, of Halle, has accepted the invitation to fill the late Professor Schröder's chair of Midwifery, and will commence his lectures on May 1st.

ANTITHERMIN is the latest introduced antipyretic agent. It is allied in its chemistry to antipyrin; phenylhydrazinlevulinic acid is the chemical name.

THE VIRGINIA STATE BOARD OF MEDICAL EXAMINERS.—The *Virginia Medical Monthly* for April, 1887, states that the object of this Virginia Board is to test candidates for practice in Virginia only upon their merits as brought out by examinations. No college professor is on the Board. The Board stands as a higher court than the college faculties; it has to pass upon the work done by the colleges. Fortunately for Virginia, the Board is composed of men well qualified for the discharge of this duty. The standard of graduation claimed by most of the reputable colleges of the country is seventy-five per cent. The Virginia Board of Medical Examiners adopts the same standard, and tests applicants solely by this standard. The Board is composed of men who possess sympathies, and who are as liberal in their markings as they should be. Without partiality to any, they are generous to all—always giving candidates the benefit of doubtfully correct replies, and even stretching their ratings as far as any proper idea of justice will allow. Not the slightest individual preference or partiality can be shown, because the examiners do not know who the candidates are. Each candidate as he enters upon the examination is given a number, but his name is known only to the Secretary of the Board. The candidate returns his examination papers only by the number assigned him, and the respective examining committees examine the papers of No. so and so, and not of Dr. so and so. Catch questions are avoided, or, if asked, are not rated; and not one who has yet presented himself for examination, so far as we have ever heard, has suggested the charge of unfairness. Some who failed in their examinations have said that some of the questions are too hard. But we publish the questions regularly, year by year, and we have not yet heard of a college professor or a practitioner of education who has said otherwise than that the candidates should be expected to answer them. And yet, in view of all this, we have just had 12 candidates rejected out of a class of 19 applicants, each one of whom is fresh from college with his diploma, and some, we learn, are *honor graduates!*

FORMIDABLE EXAMINATIONS.—The preliminary examination customary in this country, is quite a different affair in Lyons, France. The medical faculty of that city, feeling that it did not receive its due in the shape of students, began to inquire into the reason therefor. It arrived at the conclusion that it was the severity of the preliminary examination which deterred students from entering there, and, to judge from a few figures, we do not wonder at their reluctance. In 1882, 33 candidates were rejected out of 41; in 1883, 15 out of 20; in 1884, the same; in 1885, 11 out of 15; in 1886 all the candidates who presented themselves were "plucked." The faculty now proposes to petition the government to abolish the examination altogether.

THE DISPOSAL OF GARBAGE.—The best methods for the disposal of garbage must necessarily differ according to circumstances. For some communities its utilization in the feeding of swine is a practical solution of the problem; while for others no better way seems to have been devised than to deposit it at sea, so far from land as to preclude the possibility of its return by wind or tide. Still another plan is that of its destruction by fire or cremation—a plan which theoretically is perhaps the most satisfactory from a sanitary standpoint, but one in regard to which practically there seem to be so many difficulties as thus far to have prevented its adoption in the largest cities of the United States. This problem is now being discussed at Milwaukee, Wis. One proposition is to take the garbage to the country and then to feed it to animals, another is to deposit in the waters of the lake, and a third to consume it by fire. A company proposes to erect two cremators, at an expense of $10,000, for this purpose, claiming that the running expenses will not exceed $15.50 per diem.—*Science*, April 1, 1887.

DECREASING BIRTH-RATE OF IRELAND.—*The Sanitary News* of March 26, 1887, writes as follows on this subject:

The marriage-rate in Ireland is the lowest of any country in the world which keeps a record of its vital statistics, and it is constantly growing lower and lower because of the emigration of men and women in the prime of life. In that unhappy country, the excess of births over deaths is but 6.4 compared with 13.9 in Scotland, and 14.3 in England and Wales. The Irish are not the people under ordinary circumstances to have small families, hence this decrease in the birth-rate is all the more alarming. The death-rate in the United Kingdom is rapidly decreasing. Fewer children die and adults reach a greater average age. The marriage-rate declines, however, having fallen off 1½ per cent. in the period 1880–1887 as compared with the period 1875–1880. The decline in marriage-rate is not due to "hard times," for, while the population of the United Kingdom increases but 12 per cent. per decade, its wealth increases 22 per cent., its trade 29 per cent., and its ship-

ping 67 per cent. The greatest danger lies in the prospect of physical degeneration because of the decreasing death-rate, which fell off 5¼ per cent. in 1881–1885, as compared with the preceding five years. With an increase of intelligence and wealth, there is always a decreasing birth-rate. France has reached that point where its births only serve to keep the population undiminished, while in our own New England, it is probable that the population would actually decrease were it not for immigration.

CHOLERA PREVENTED.—*The Sanitary News* of March 26, 1887, describes the following successful attempt to eradicate a cholera epidemic:

At a colliery on the island of Takasima, Japan, cholera last year attacked 1500 out of 4000 laborers, and 800 died. As this was the third time the island had been ravaged by cholera, the company used sanitation as a preventive. The U. S. consul reports that this work was carried out as follows: A complete sewerage system was formed. Heavy pumping arrangements were erected on the beach, for pumping sea-water to the highest point of the island, whence by an arrangement of drains and sluices it was gravitated back to the sea, flushing for three or four hours daily every drain among the dwelling houses. An extensive fresh-water condensing apparatus was erected, turning out from 7000 to 8000 gallons of water per day. The wells on the island were closed, and water from the main land only allowed to be imported for purposes of washing, etc. A strict system of food quarantine was instituted, and all food was supplied through the company. Three digesters, each of 800 gallons capacity, were erected, beef killed under inspection being used to make soup, about 1000 gallons per day being supplied to the miners. Beef was also served out in the rations. All shell-fish were prohibited, only deep-water fish, after inspection, being allowed to be landed or sold. No deleterious vegetables of any kind were permitted to be brought to the island, potatoes, beans, and certain harmless native vegetables being the only ones allowed for consumption. The success of the system adopted has been amply demonstrated by the fact that Takasima has been the only place in Nagasaki Ken untouched by cholera during this year's epidemic.

THE CASE OF CATALEPSY NOW AT LONDON.—*Science* for April 22, 1887, describes the following case which is now exciting great interest in London:

The case of M. Chauffat, a native of Haute Savoie, who has been overtaken by a trance in a French hotel in London, has been exciting very great interest among the section of medical men devoted to psychological studies. This is the seventeenth day of his cataleptic condition, from which he shows no sign of awakening, and the administration of food is not a little difficult. Chauffat has been a patient of the famous Dr. Charcot, in the Saltpêtrière Hospital in Paris, where a large number of experiments are now being conducted upon hypnotizing. Dr. Charcot, however, particularly wishes it to be understood that Chauffat is not a hypnotized subject. The general state of his body is good, the temperature and pulse being normal, though the respiration is subject to great variation, changing from 15 to 28 in the course of a few hours. The only way in which he can be aroused sufficiently for the administration of food is by directing a strong ray of light on his eyes. An examination of them by the eminent oculist, Mr. Brudenell Carter, showed that all the vessels, both veins and arteries, were much contracted and very small. Both sides of the body are alike in their condition, though the cataleptic condition is stronger in the limbs than in the trunk. The most extraordinary feature of the case is the remarkable results obtained by gently stroking Chauffat's arm. The limb, if raised upright, remains in that position indefinitely; and, when certain nerves are stroked, the fingers clinch tightly, the blood is forced from the extremity, the hand and forearm turn slowly round to the right till the strain is so great that the muscles stand out rigidly, the limb being perfectly rigid. On the other hand, the most gentle touch or stroking of the flexor of the forearm is sufficient to relax the whole. Without doubt, Chauffat's case is one of the most remarkable of the kind that has occurred in England, although they are more frequently to be met with in France.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 26 TO MAY 2, 1887.

BILLINGS, JOHN S., *Major and Surgeon.*—Granted leave of absence for 10 days, to take effect May 3, 1887.—*S. O. 98, A. G. O.*, April 28, 1887.

WOODRUFF, CHARLES E., *First Lieutenant and Assistant Surgeon* (recently appointed).—Ordered for duty at Fort Wayne, Mich.—*S. O. 96, A. G. O.*, April 26, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 30, 1887.

ATLEE, L. W., *Assistant Surgeon.*—Ordered to the Receiving Ship "Vermont."

BIDDLE, CLEMENT, *Passed Assistant Surgeon.*—Detached from the Naval Academy, and to Marine Rendezvous, Phila., Pa.

ASHBRIDGE, RICHARD, *Passed Assistant Surgeon.*—Ordered to the Naval Academy.

HUDSON, A., *Medical Inspector.*—Ordered to the United States Steamship "Trenton."

HIBBETT, C. T., *Passed Assistant Surgeon.*—Ordered to the United States Steamship "Trenton."

DECKER, CORBIN, J., *Assistant Surgeon.*—Detached from the Receiving Ship "St. Louis" and to the United States Steamship "Trenton."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FOR THE THREE WEEKS ENDING APRIL 30, 1887.

GOLDSBOROUGH, C. B., *Surgeon.*—Leave of absence extended thirty days on account of sickness.—April 20, 1887.

DEVAN, S. C., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days—to take effect when relieved.—April 12, 1887.

BRATTON, W. D., *Assistant Surgeon.*—To proceed to Port Townsend, W. T., and assume temporary charge of the service.—April 21, 1887.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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